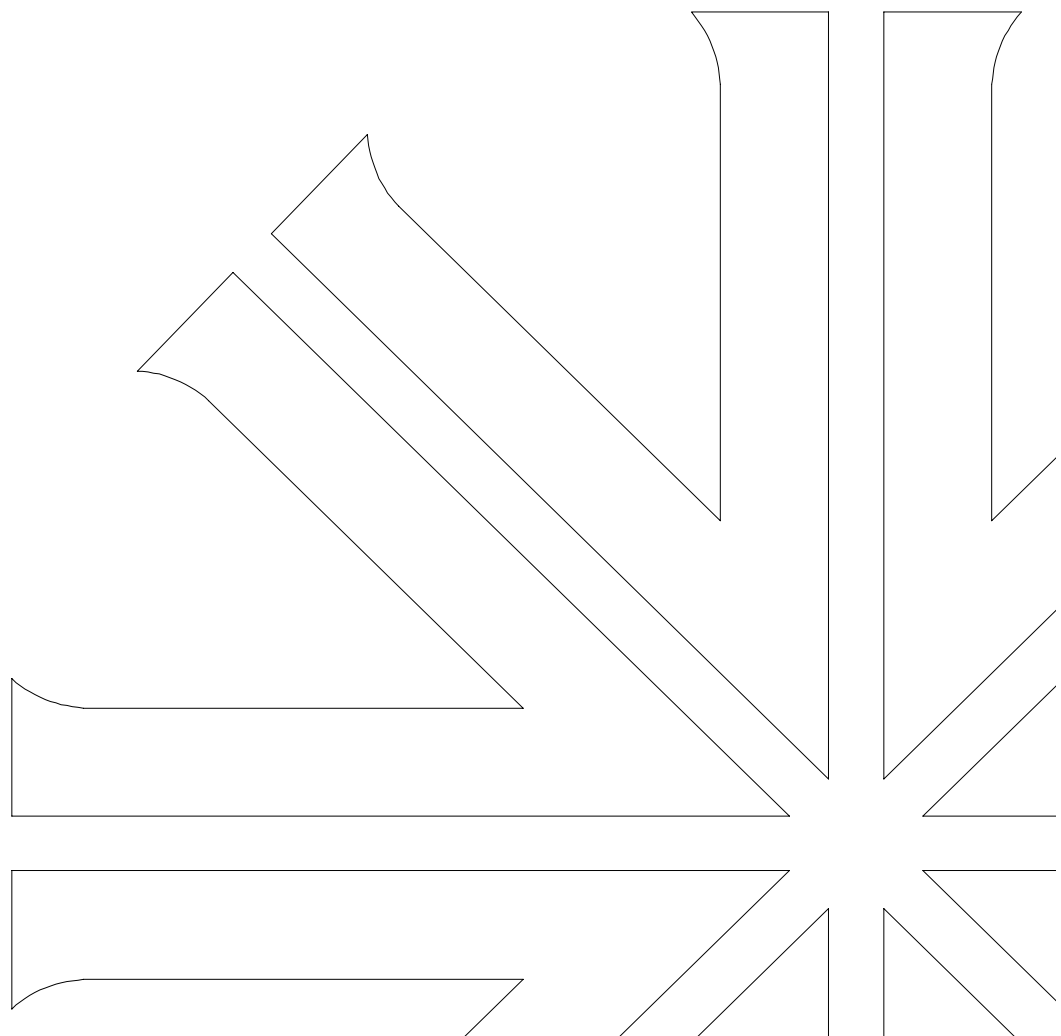


Service Manual

VL6™ Series Spot Luminaire

02.9638.0010 C

25-July-01



VARI*LITE®
Express yourself.

VARI***LITE**[®] - VL6[™] SERIES SPOT LUMINAIRE SERVICE MANUAL

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European (UK) Patents No. 0 652 400; 0 586 049; 0 565 218; 0 547 732; 0 534 710; 0 495 305; 0 474 202; 0 379 970; 0 253 082; 0 253 081; 0 248 974; 0 192 882; 0 140 994; 0 060 068;

Germany Patents No. 694 25 943.8; 693 14 122.0; 692 08 615.3; 692 07 692.1; 691 31 478.0; 691 21 029.2; 690 33 385.4; 37 89 166.9; 37 68 727.1; 37 51 804.6; 37 50 201.8; 35 87 270.5; 32 79 888.1; 32 74 291.6;

Germany Design Patents No. M 98 01 745.4; M 96 04 515.9; M 96 04 514.0; M 94 07 689.8; M 94 02 951.2; M 499 03 583.6; M 498 11 203.9; G 93 12 884.3;

Spain Patents No. 2 090 191; 2 084 289; 2 020 960; 0 548 328;

Spain Utility Model Patent No. 2.031.748;

Spain Design Patents No. 0.137.502; 0.137.501; 0.133.573;

Greece Patent No. 910.400.544;

Hong Kong Patents No. 965/1990; 285/1987;

Japan Patents No. 2,843,696; 2,059,669; 2,055,324; 2,002,168; 1,966,525; 1,889,481; 1,792,721; 1,770,241; 1,723,825; 1,683,007; 1,533,011;

Japan Design Patents No. 985,985-1; 985,985; 947,552; 945,436-1; 945,436; 1,106,089; 1,077,598; 1,072,598; 1,060,414; 1,002,123;

Korea Patents No. 76,310; 42,639; 283,770; 181,180;

Korea Design Patents No. 209,896; 209,895;

Mexico Patent No. 180,148;

Singapore Patents No. 663/90; 134/87;

Taiwan Patents No. 78,726; 66,975; 65,380; 28,275;

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VL6[™] Series Spot Luminaire Service Manual

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VL6[™] Series Spot Luminaire Service Manual
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Compliance Notice

FCC This equipment has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference when this equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with Vari-Lite system, service, and safety guidelines, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his/her own expense

Safety Notice

It is extremely important to read ALL safety information and instructions provided in this manual and any accompanying documentation before installing and operating the products described herein. Heed all cautions and warnings during installation and use of this product.

Safety symbols used throughout this manual are as follows:



CAUTION advising of potential damage to product.



WARNING advising of potential injury or death to persons.

GENERAL INFORMATION PERTAINING TO PROTECTION AGAINST ELECTRICAL SHOCK, FIRE, EXPOSURE TO EXCESSIVE UV RADIATION, AND INJURY TO PERSONS CAN BE FOUND BELOW.

WARNING:

INSTRUCTIONS FOR CONTINUED PROTECTION AGAINST FIRE

1. VARI**LITE*® luminaires have been designed for use only with certain Phillips and Osram HID lamps. Note lamp type (MSR400, MSR575HR etc.) before replacing lamps. Installing another type of lamp may be hazardous.
2. Luminaires may be mounted on any type of surface as long as mounting instructions are followed. See instructions detailed in this manual.
3. Replace fuses with same type and rating only.
4. Note distance requirement from combustible materials or illuminated objects for VARI**LITE*® luminaires.

WARNING:

INSTRUCTIONS FOR CONTINUED PROTECTION AGAINST ELECTRICAL SHOCK

1. VARI**LITE*® luminaires are designed for dry locations only. Exposure to rain or moisture may damage luminaire.
2. Disconnect power before servicing any VARI**LITE*® equipment.
3. Servicing to be performed by qualified personnel only.

WARNING:

INSTRUCTIONS FOR CONTINUED PROTECTION AGAINST EXCESSIVE EXPOSURE TO UV RADIATION

1. Many VARI***LITE**® luminaires use an HID type lamp that produces UV radiation. **DO NOT** look directly at lamp.
2. It is hazardous to operate luminaires without lens or shield. Shields, lenses, or ultraviolet screens shall be changed if they have become visibly damaged to such an extent that their effectiveness is impaired. For example, by cracks or deep scratches.

WARNING:

INSTRUCTIONS FOR PROTECTION AGAINST INJURY TO PERSONS

1. Exterior surfaces of the luminaire will be hot during operation. Use appropriate safety equipment (gloves, eye protection, etc.) when handling and adjusting hot equipment and components.
2. Luminaires will have a hot lamp when operating. Disconnect power and allow lamp to cool before replacing.
3. Arc lamps emit ultraviolet radiation which can cause serious skin burn and eye inflammation. Additionally, arc lamps operate under high pressure at very high temperatures. Should the lamp break, there can exist a danger of personal injury and/or fire from broken lamp particles being discharged.
4. Wear eye protection when relamping.
5. Appropriate safety equipment (gloves, eye protection) should be used when handling damaged lamps.
6. If lamp is touched with bare hands, clean lamp with denatured alcohol and wipe with lint-free cloth before installing or powering up the luminaire.
7. The lamp shall be changed if it has become damaged or thermally deformed.

WARNING:

RF INTERFERENCE

1. This is a Class A product. In a domestic environment this product may cause radio interference, in which case, the user may be required to take adequate measures.

ARC LAMP CHARACTERISTIC CONSIDERATIONS

1. Arc lamps require a period of time to relight after a power interruption or a severe voltage dip. In some cases, lamp will automatically relight after it has cooled depending on Lamp Power-Up State (L ON/ LOFF) system configuration setting.
2. Burning position is Universal.

Sicherheitshinweise

Es ist äußerst wichtig, ALLE Sicherheitsinformationen und -hinweise in diesem Handbuch und dem beiliegenden Informationsmaterial zu lesen, bevor Sie die hierin beschriebenen Produkte installieren bzw. bedienen. Halten Sie bei der Installation und dem Einsatz dieses Produkts alle Warnhinweise und Vorsichtsmaßnahmen ein.

Folgende Sicherheitssymbole werden in diesem Handbuch verwendet:



VORSICHT - weist auf möglichen Produktschaden hin.



WARNUNG - weist auf mögliche Körperverletzung und Lebensbedrohung hin.

NACHSTEHEND FINDEN SIE ALLGEMEINE HINWEISE ÜBER SICHERHEITSVORKEHRUNGEN GEGEN ELEKTROSCHOCK, FEUER, ÜBERHÖHTE UV-STRAHLUNG UND KÖRPERVERLETZUNGEN.

WARNUNG:

HINWEISE ZUM FEUERSCHUTZ

1. VARI**LITE*®-Scheinwerfer sind ausschließlich für den Einsatz mit bestimmten Philips und Osram HID-Lampen geeignet. Achten Sie auf den Lampentyp (MSR400, MSR575HR etc.), bevor Sie die jeweiligen Lampen ersetzen. Die Installation eines anderen Lampentyps kann gefährlich sein.
2. Scheinwerfer können auf jeder beliebigen Oberfläche montiert werden, solange Sie die Montageanweisungen befolgen. Detaillierte Hinweise finden Sie in diesem Handbuch.
3. Ersetzen Sie Sicherungen nur mit Sicherungen vom gleichen Typ und gleicher Stärke.
4. Beachten Sie die Einhaltung des erforderlichen Sicherheitsabstandes der VARI**LITE*®-Scheinwerfer von brennbarem Material oder beleuchteten Objekten.

WARNUNG:

HINWEISE ZUM SCHUTZ GEGEN ELEKTROSCHOCK

1. VARI**LITE*®-Scheinwerfer eignen sich ausschließlich für trockene Standorte. Regen oder Feuchtigkeit können die Scheinwerfer beschädigen.
2. Unterbrechen Sie die Stromzufuhr, bevor Sie mit der Arbeit an VARI**LITE*®-Geräten beginnen.
3. Die Geräte sollten nur von qualifiziertem Personal gewartet werden.

WARNUNG:

HINWEISE ZUM SCHUTZ GEGEN ÜBERHÖHTE UV-STRAHLUNG

1. Viele VARI***LITE**®-Scheinwerfer verwenden einen HID-Lampentyp, der UV-Strahlen abgibt. **SCHAUEN SIE NICHT** direkt in die Lampe.
2. Es ist gefährlich, Leuchten ohne Linsen oder Blenden zu bedienen. Blenden, Linsen oder Ultraviolettsschirme müssen ausgetauscht werden, sofern deren Schutzwirkung durch sichtbare Beschädigung (z. B. Sprünge oder Schrammen) eingeschränkt ist.

WARNUNG:

HINWEISE ZUM SCHUTZ GEGEN KÖRPERVERLETZUNGEN

1. Bei Betrieb sind die Außenflächen der Scheinwerfer heiß. Verwenden Sie bei der Bedienung von aufgeheizter Apparatur die jeweils geeignete Sicherheitsausrüstung (Handschuhe, Augenschutz etc.).
2. Bei Betrieb der Scheinwerfer ist die Lampe heiß. Unterbrechen Sie die Stromzufuhr und lassen Sie die Lampe abkühlen, wenn Sie diese austauschen.
3. Bogenlampen senden ultraviolette Strahlen aus, die Hautverbrennungen und Augenentzündungen verursachen können. Der Betrieb von Bogenlampen erfolgt unter Hochdruck und bei hohen Temperaturen. Sollte die Lampe zerbrechen, besteht die Gefahr von Körperverletzung bzw. von Feuer, das von Lampenteilen ausgelöst werden kann.
4. Tragen Sie beim Austausch der Lampen einen Augenschutz.
5. Die geeignete Sicherheitsausrüstung (Handschuhe, Augenschutz) sollte beim Umgang mit beschädigten Lampen verwendet werden.
6. Wenn die Lampe mit bloßen Händen berührt wird, reinigen Sie sie mit denaturiertem Alkohol und einem flusenfreien Tuch, bevor Sie die Scheinwerfer installieren oder in Betrieb nehmen.
7. Wenn die Lampe beschädigt oder durch Hitzeeinwirkung deformiert ist, muß diese ausgetauscht werden.

WARNUNG:

HF-INTERFERENZ

1. Es handelt sich um ein Produkt der Klasse A. In einer Wohnumgebung kann das Produkt Hochfrequenzstörungen verursachen. In diesem Fall müssen eventuell geeignete Maßnahmen getroffen werden.

BESONDERHEITEN VON BOGENLAMPEN

1. Bogenlampen benötigen eine gewisse Zeitdauer, um nach einem Stromausfall oder einem Spannungsgefälle wieder aufzuleuchten. In einigen Fällen wird die Lampe nach Abkühlung automatisch wieder aufleuchten, je nach der Systemkonfigurationseinstellung des Lampeneinschaltungsstatus (L ON/ LOFF).
2. Die Brennposition ist Universal.

Notes de sécurité

Avant de procéder à l'installation des produits décrits dans ce guide et de les mettre en marche, il est extrêmement important de lire TOUS les renseignements et TOUTES les directives de sécurité contenues dans ce guide ainsi que toute documentation jointe. Tenir compte de tous les avertissements et suivre toutes les précautions pendant l'installation et l'utilisation de cet appareil.

Les symboles de sécurité utilisés dans ce guide sont les suivants :



ATTENTION Ce symbole annonce que l'appareil risque d'être endommagé.



AVERTISSEMENT Ce symbole annonce qu'il y a risque d'accident grave ou même fatal.

CETTE SECTION CONTIENT DES INFORMATIONS GÉNÉRALES POUR SE PROTÉGER CONTRE LES DÉCHARGES ÉLECTRIQUES, LES INCENDIES, L'EXPOSITION EXCESSIVE AUX RAYONS UV ET TOUT AUTRE ACCIDENT POUVANT ENTRAÎNER DES BLESSURES.

AVERTISSEMENT:

DIRECTIVES POUR SE PROTÉGER CONTRE LES INCENDIES

1. Les luminaires VARI**LITE*® ont été conçus pour être utilisés uniquement avec certaines lampes Philips et Osram HID. Vérifier le type de lampe (MSR400, MSR575HR etc.) avant de remplacer les lampes. L'installation d'un autre type de lampe peut poser un danger.
2. Les luminaires peuvent être fixés sur tout type de surface tant que les directives de montage sont respectées. Voir les explications détaillées dans ce guide.
3. Ne remplacer les fusibles qu'avec ceux du même type, ayant les mêmes caractéristiques.
4. Vérifier la distance à respecter entre les matériaux combustibles ou les objets illuminés et les luminaires VARI**LITE*®.

AVERTISSEMENT:

DIRECTIVES POUR SE PROTÉGER CONTRE LES DÉCHARGES ÉLECTRIQUES

1. Les luminaires VARI**LITE*® sont conçus pour une utilisation au sec uniquement. Une exposition à la pluie et à l'humidité risque d'endommager le luminaire.
2. Débrancher l'appareil avant de procéder à la révision de tout matériel VARI**LITE*®.
3. Les révisions doivent être effectuées uniquement par des personnes qualifiées.

AVERTISSEMENT:

DIRECTIVES POUR SE PROTÉGER CONTRE UNE EXPOSITION EXCESSIVE AUX RAYONS UV

1. Plusieurs luminaires VARI***LITE**® utilisent une lampe de type HID qui produit des rayons UV. NE PAS fixer son regard sur la lampe.
2. L'utilisation des luminaires sans lentille ou blindage pose des risques. Tous blindages, lentilles ou écrans ultraviolet visiblement endommagés au point que leur efficacité en est affectée doivent être remplacés, par exemple s'il y a des fissures ou de profondes rayures.

AVERTISSEMENT:

DIRECTIVES POUR SE PROTÉGER CONTRE LES ACCIDENTS POUVANT ENTRAÎNER DES BLESSURES

1. Les surfaces externes du luminaire deviennent brûlantes quand l'appareil est en marche. Pour manœuvrer ou ajuster des appareils brûlants et leurs composants, se protéger suffisamment (gants, protection pour les yeux, etc.).
2. La lampe du luminaire est brûlante lorsqu'il est en marche. Débrancher le courant et attendre que la lampe ait refroidi avant de la remplacer.
3. Les lampes à arc émettent des rayons ultraviolets pouvant causer de graves brûlures sur la peau et une inflammation des yeux. De plus, les lampes à arc fonctionnent sous haute tension à de très hautes températures. Si la lampe se casse, les particules de la lampe cassée peuvent causer blessures et/ou incendie en s'éparpillant.
4. Se protéger les yeux pour remplacer la lampe.
5. Utiliser des appareils de protection appropriés (gants, protection des yeux) pour manier des lampes endommagées.
6. Si la lampe a été touchée avec des mains nues, la nettoyer avec de l'alcool dénaturé et l'essuyer avec un chiffon non-pelucheux avant d'installer ou de brancher le luminaire.
7. Si la lampe a été endommagée ou a reçu une déformation thermique, elle doit être remplacée.

AVERTISSEMENT:

INTERFÉRENCE RF

1. Cet appareil est de Classe A. Dans un environnement domestique, cet appareil peut causer des interférences radio, et si c'est le cas, l'utilisateur peut avoir à prendre des mesures adéquates.

CONSIDÉRATIONS DES CARACTÉRISTIQUES DE LAMPES À ARC

1. Après une interruption de courant ou une baisse importante de voltage, les lampes à arc mettent du temps avant de se rallumer. Dans certains cas, la lampe se rallumera automatiquement après s'être refroidie. Cela dépend de la manière dont le système est réglé pour le statut de mise en marche de la lampe (L ON/ LOFF).
2. La position Brûler est Universelle.

Aviso sobre Seguridad

Es muy importante leer TODA la información e instrucciones sobre seguridad que se indica en este manual así como en los documentos adjuntos antes de instalar y operar los productos descritos. Se debe prestar atención a todos los avisos y advertencias durante la instalación y uso de este producto.

Los símbolos de seguridad usados en este manual son los siguientes:



CUIDADO, indica posibles daños al producto.



ADVERTENCIA, indica posibles lesiones o muerte a las personas.

LA INFORMACIÓN GENERAL RELACIONADA A LA PROTECCIÓN CONTRAGOLPES DE CORRIENTE ELÉCTRICA, INCENDIO, EXPOSICIÓN EXCESIVA A RADIACIÓN ULTRA VIOLETA Y LESIONES A LAS PERSONAS SE PUEDE ENCONTRAR SEGUIDAMENTE:

ADVERTENCIA:

INSTRUCCIONES PARA PROTECCIÓN CONTINUA CONTRA INCENDIO

1. Las luminarias VARI**LITE*® han sido diseñadas para ser usadas solamente con algunas lámparas HID Philips y Osram. Tome nota del tipo de lámpara (MSR400, MSR575HR etc.) antes de reemplazarla. Instalación de otro tipo de lámpara puede ser peligroso.
2. Las luminarias se pueden instalar en cualquier tipo de superficie siempre que se sigan las instrucciones de instalación. Vea las instrucciones detalladas en este manual.
3. Reemplace los fusibles solamente con los del mismo tipo y especificación.
4. Tome nota de los requerimientos de distancia de materiales combustibles u objetos iluminados para las luminarias VARI**LITE*®.

ADVERTENCIA:

INSTRUCCIONES PARA PROTECCIÓN CONTINUA CONTRA CHOQUE ELÉCTRICO

1. Las luminarias VARI**LITE*® están diseñadas solamente para lugares secos. La exposición a la lluvia o humedad pueden dañar la luminaria.
2. Desconecte la energía antes de dar servicio a cualquier equipo de VARI**LITE*®.
3. El servicio debe ser realizado solamente por personal calificado.

ADVERTENCIA:

INSTRUCCIONES PARA PROTECCIÓN CONTINUA CONTRA LA EXPOSICIÓN EXCESIVA DE RADIACIÓN ULTRA VIOLETA

1. Muchas luminarias VARI***LITE**® usan un tipo de lámpara HID que produce radiación UV. NO mire directamente a la lámpara.
2. Es peligroso operar luminarias sin lentes o protectores. Debe cambiar los protectores, lentes o pantallas ultravioletas si se aprecia que han sido dañadas, y que su efectividad pudiera estar deteriorada. Por ejemplo, si tuvieran rajaduras o raspaduras profundas.

ADVERTENCIA:

INSTRUCCIONES PARA PROTECCIÓN CONTRA LESIONES DE PERSONAS

1. Las superficies exteriores de las luminarias están calientes durante su operación. Use un equipo de seguridad apropiado (guantes, protección para los ojos, etc.) cuando haga ajustes en el equipo y componentes que están calientes.
2. Cuando las luminarias están en operación la lámpara estará muy caliente. Desconecte la energía y deje que la lámpara se enfríe antes de reemplazarla.
3. Las lámparas de arco emiten radiaciones ultravioletas que pueden ocasionar serias quemaduras a la piel e inflamación a los ojos. Además, las lámparas de arco operan a alta presión y muy alta temperatura. Si la lámpara se rompe, puede existir el peligro de lesiones al personal o un incendio ocasionado por las partículas de la lámpara rota que se caen.
4. Use protección para los ojos cuando vuelve a colocar una lámpara nueva.
5. Use un equipo de seguridad apropiado (guantes, protección para los ojos, etc.) cuando trabaje con lámparas dañadas.
6. Si toca la lámpara con las manos, limpie la lámpara con alcohol desnaturalizado y con tela sin pelusas antes de instalar o volver a conectar la luminaria.
7. Cambie la lámpara si está dañada o deformada termicamente.

ADVERTENCIA:

INTERFERENCIA RF

1. Este es un producto de Clase A. En el ambiente de la casa este producto puede ocasionar radiointerferencia, en cuyo caso, el usuario debe tomar las medidas adecuadas.

CONSIDERACIONES SOBRE LAS CARACTERÍSTICAS DE LA LÁMPARA DE ARCO

1. Las lámparas de arco requieren un período de tiempo para volver a iluminarse después de una interrupción de energía o de una severa caída de voltaje. En algunos casos, la lámpara se volverá a iluminar en forma automática después que se ha enfriado dependiendo de la configuración del sistema de energía de la lámpara (L ON / L OFF) (L encendida / L apagada).
2. La posición de encendido es universal.

安全性に関する注意事項

ここに記載されている製品を取り扱う場合は、まず本マニュアルおよび付属のマニュアルの安全性に関する情報と説明をすべてお読みください。また、実際に本製品を取り付けたり使用する際には、すべての注意事項および警告に留意して作業してください。

本マニュアルでは、以下の安全マークを使用しています。



注意：製品に損傷を与える危険性があります。



警告：人身事故につながる危険性があります。

感電、火災、UV 放射に対する過度の露出、および人身事故を防ぐための一般的な情報については、以下の説明をお読みください。

警告：

火災の発生を防ぐためのヒント

1. VARI***LITE**® 照明器具は、Philips および Osram の HID ランプを使用するように設計されています。ランプを交換する際は、ランプの種類（MSR400、MSR575HR など）を確認するようにしてください。他の種類のランプを取り付けると危険です。
2. 照明器具は、本マニュアルの指示に従って操作するかぎり、どのようなタイプの表面にでも取り付けることができます。詳細については、本マニュアルを参照してください。
3. ヒューズを交換する場合は、同じヒューズ（同じ種類、同じクラス）を使用してください。
4. VARI***LITE**® 照明器具は、可燃性物質または他の光源から必要な距離だけ離して配置してください。

警告：

感電を防ぐためのヒント

1. VARI***LITE**® 照明器具は、乾燥した環境で使用するよう設計されています。雨で濡れる場所や湿気の多い場所に取り付けると、照明器具が傷むことがあります。
2. VARI***LITE**® 照明器具を修理点検する場合は、必ず先に電源を切ってください。
3. 照明器具の修理点検は、資格を持つ技師のみが行うようにしてください。

警告：**過度の UV 放射にさらされないためのヒント**

1. VARI***LITE**® 照明器具の多くは、UV 放射を生ずる HID タイプのランプを使用しています。ランプを直視することは避けてください。
2. レンズまたはシールドを使わずに照明器具を点灯すると危険です。レンズ、シールド、紫外線画面は、ひび割れや深い引っかき傷などにより、その効力が損なわれるようになったら取り替えるようにします。

警告：**人身事故を防ぐためのヒント**

1. 照明器具が点灯しているときは、その外側が熱くなります。熱くなった器具やコンポーネントを取り扱う際には、適切な防具（手袋や保護用眼鏡）を使用してください。
2. 照明器具が点灯しているときは、そのランプが熱くなります。ランプを交換する場合は、照明器具の電源を切り、ランプの温度が下がるまで待ってください。ランプの裏ぶたをあけると、遮断スイッチが働いて、ランプの電源が切れる場合があります。
3. アーク灯は紫外線を放射します。この紫外線によって、ひどい火傷を負ったり、目の炎症を起こすことがあります。さらに、アーク灯は、高圧高温の状態で光を発します。そのため、万一アーク灯が破損すると、飛び散った破片で人身事故や火災が発生する危険性があります。
4. 再点灯するときには、保護用眼鏡を着用してください。
5. 損傷したランプを取り扱う場合は、適切な防具（手袋や保護用眼鏡）を着用してください。
6. 手袋を着用せずに直接手でランプを触った場合は、変性アルコールを使ってランプをきれいにし、糸くずの出ない布で拭いてから照明器具を取り付け、電源を入れるようにします。
7. 傷がついたランプや熱によって変形したランプは取り替えてください。

警告：**RF 干渉**

1. 本製品は **Class A** に分類されます。本製品は、家庭環境において無線干渉を起こす可能性があります。その場合、使用者は適切な処置を取らなければならないことがあります。

アーク灯の特性

1. 停電後または大きな電圧ディップ後にアーク灯を再点灯する場合は、しばらく時間をおくようにしてください。Lamp Power-Up State (L ON/ L OFF) システム設定によっては、温度が下がったときに自動的に再点灯される場合もあります。
2. アーク灯は点光源です。

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Introduction

Disclosure

This technical manual is confidential property of Vari-Lite, Inc. All information contained herein is the sole and exclusive property of Vari-Lite, Inc. and may not be used, disclosed, or reproduced in any manner without the prior written consent of Vari-Lite, Inc.



WARNING: It is important to read ALL accompanying safety instructions to avoid damage to the product and potential injury to yourself or others.

About This Manual

This manual provides description, repair procedures, and illustrated parts breakdown for the VL6™ series spot luminaires. The manual is intended for use by Vari-Lite personnel and by Vari-Lite's customers/clients. The following equipment items are covered in this manual:

Equipment Description	Part Number
VL6™ Spot Luminaire	20.9638.0001
VL6B™ Spot Luminaire	20.9660.0001
VL6C™ Spot Luminaire	21.9674.0007

Product Support and Documentation

Customer Service

The Vari-Lite Customer Service Department provides assistance to anyone with a problem or question about VARI**LITE*® equipment. The Customer Service Department will help troubleshoot any problem and recommend possible solutions or improvements. Whenever a problem is encountered that is not readily repairable or if there are questions, technical or otherwise, call the Customer Service Department at the office from which the equipment originated. Emergency contact numbers can be found for each office at: www.vari-lite.com (connect to the Vari-Lite homepage and follow the Support link). If for any reason that office cannot be reached, contact the Vari-Lite Customer Service Department in Dallas, Texas, USA at 1-877-VARI-LITE (1-877-827-4548) or by e-mail at customerservice@vari-lite.com.

Technical Bulletins and Notices

Technical bulletins concerning the latest changes to VARI**LITE* equipment are issued from the Dallas, Texas USA office. They are documentation supplements that contain procedures for equipment upgrades, retrofits, and repairs not found in the existing manuals. Operator technical bulletins are also issued to document changes in control software. Technical bulletins are integrated into the appropriate equipment manuals as those manuals are revised. Bulletins are categorized by assembly or subassembly, and identified by a number such as VL6-001 (VL6 series luminaire Technical Bulletin number 1). Refer to Appendix A, Technical Bulletins, for a list of the current technical bulletins associated with VL6 series spot luminaires.

Technical notices are also issued from the Dallas, Texas USA office. They are non-procedural documents that contain information regarding product support issues, current equipment problems, software bugs, and documentation corrections. All technical notices begin with the prefix TN and are numbered sequentially, such as TN-138 (Tech Notice number 138).

CHAPTER 1.

Descriptions and Overview

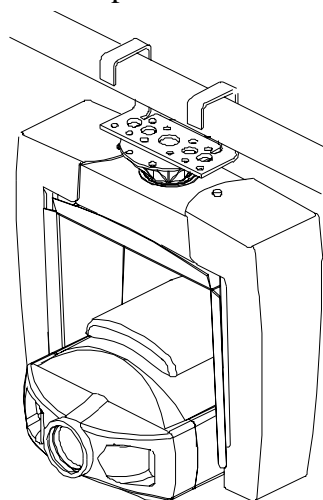
This chapter provides an overview of luminaire features, components and operations.

- **Features**
- **Major Components**
- **Operation Overview**

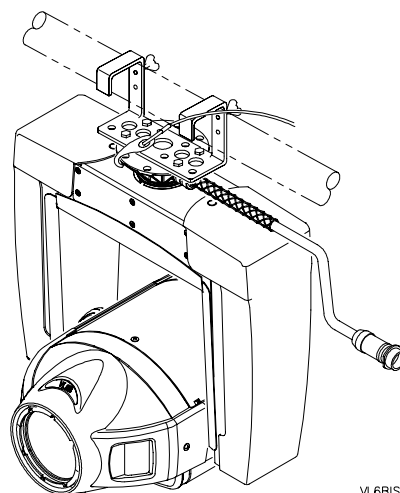
Features

Overview

VL6 series spot luminaires are available in three different configurations: VL6, VL6B, and VL6C spot luminaires.



VL6 Luminaire



VL6B/VL6C Luminaire

Standard Features

VL6 series spot luminaires contain the following standard features:

- Variable beam focus to soften the edges of gobos or spots and provide gobo crossfades.
- Full field dimmer to allow smooth timed fades and fast blackouts.
- Mechanical iris for continuous beam size control with rapid beam size changes and smooth timed beam angle changes.
- Two, 12-position wheels, each providing 11 easily loaded positions (and 1 open) for interchangeable dichroic color and gobo selections.
- Smooth, time controlled continuous 360° pan and 270° tilt movement.
- Control by VARI**LITE* systems or a wide variety of DMX512 consoles.
- Two truss hook brackets for versatile hanging configurations.

Specific Features

VL6 Luminaire

- A 400 watt arc source.
- Choice of three lenses (narrow, medium, or wide field of view).
- Smooth reflector which provides a peaked or flat field.

VL6B Luminaire

- A 400 watt arc source.
- Rotatable, indexable gobos.
- A 3:1 zoom optics assembly.

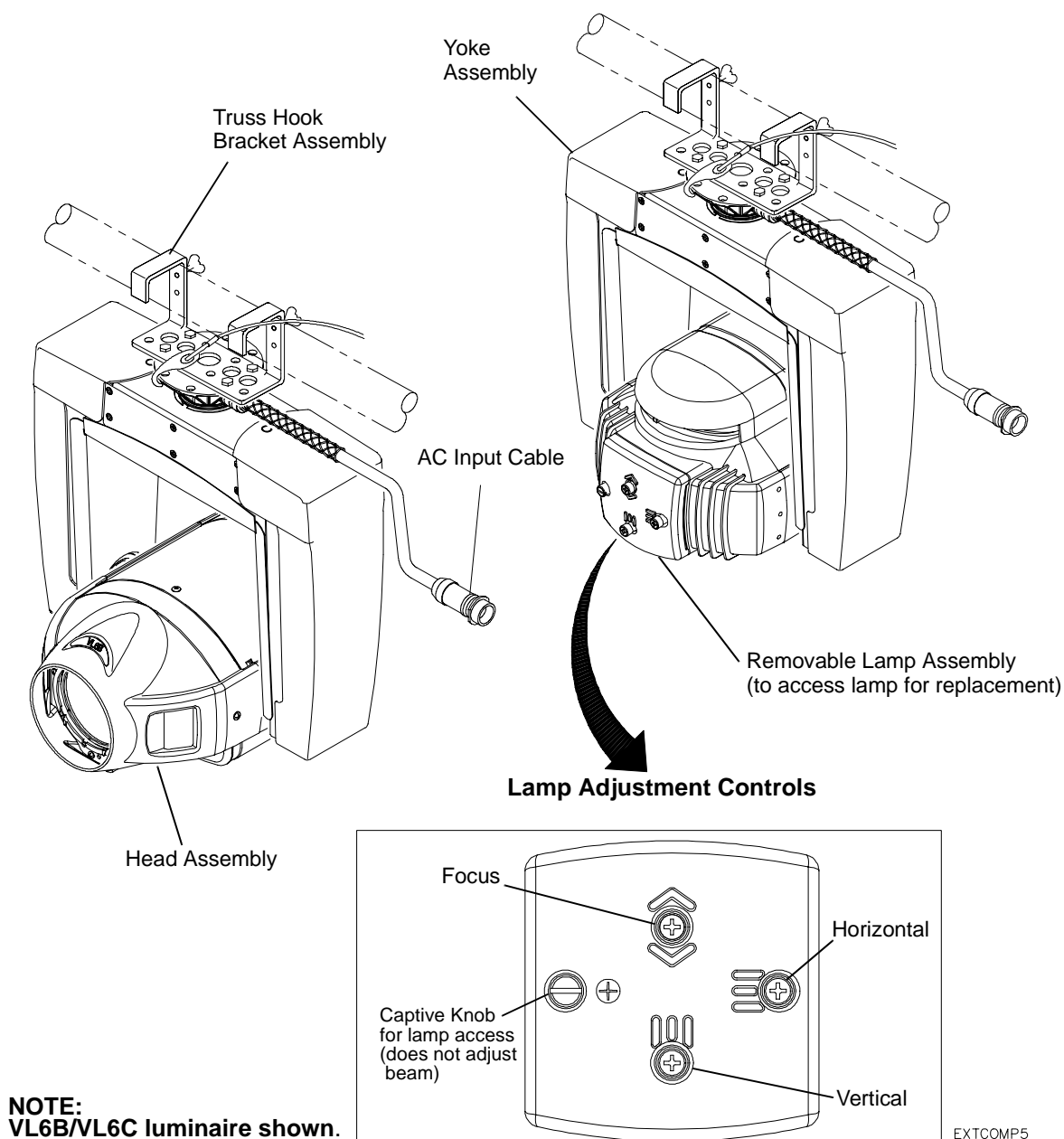
VL6C Luminaire

- A 700 watt arc source.
- Rotatable, indexable gobos.
- A 3:1 zoom optics assembly.

Major Components

Exterior Components

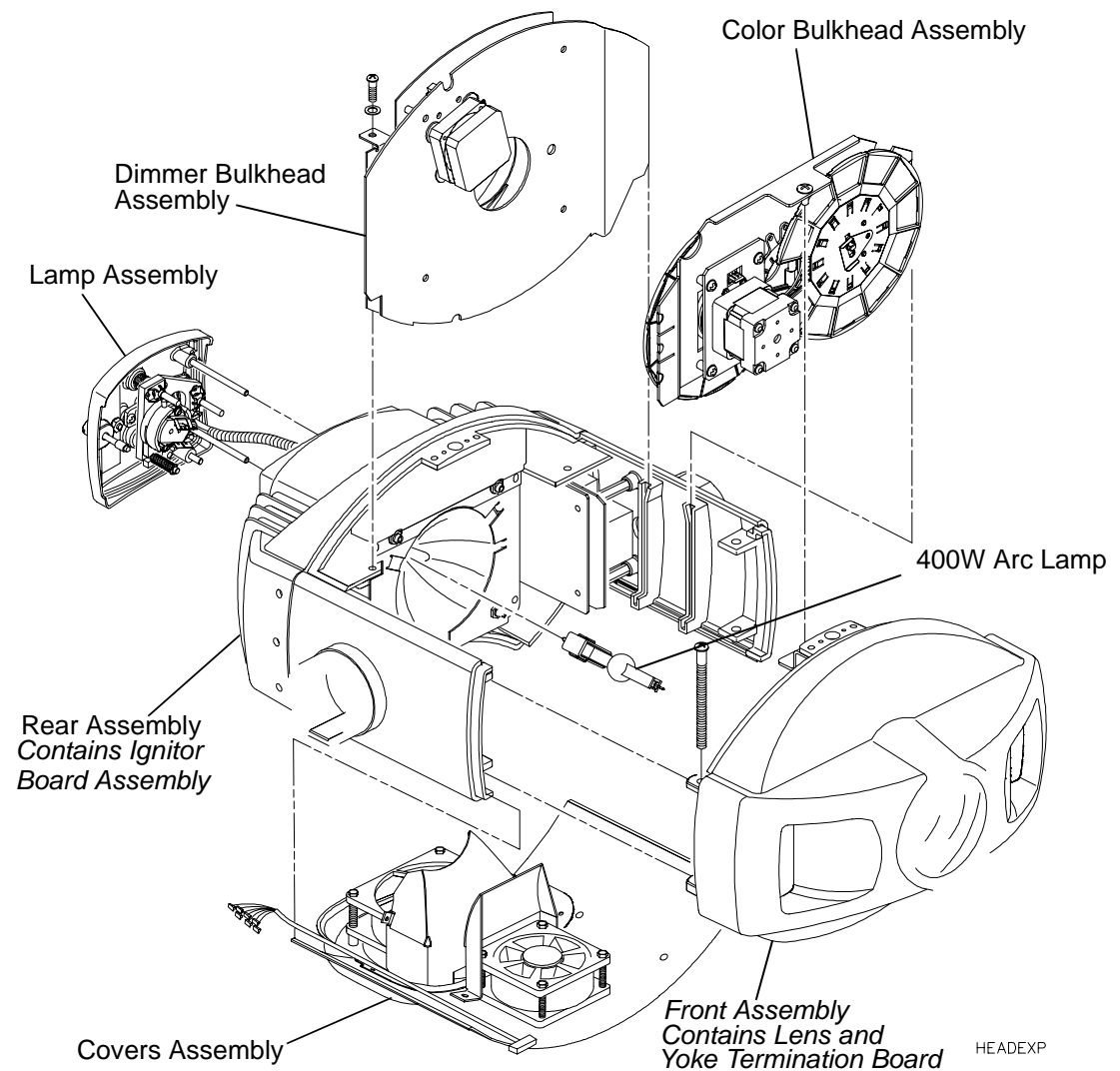
The following illustration shows the major VL6 series spot luminaire components and controls.



Head Components

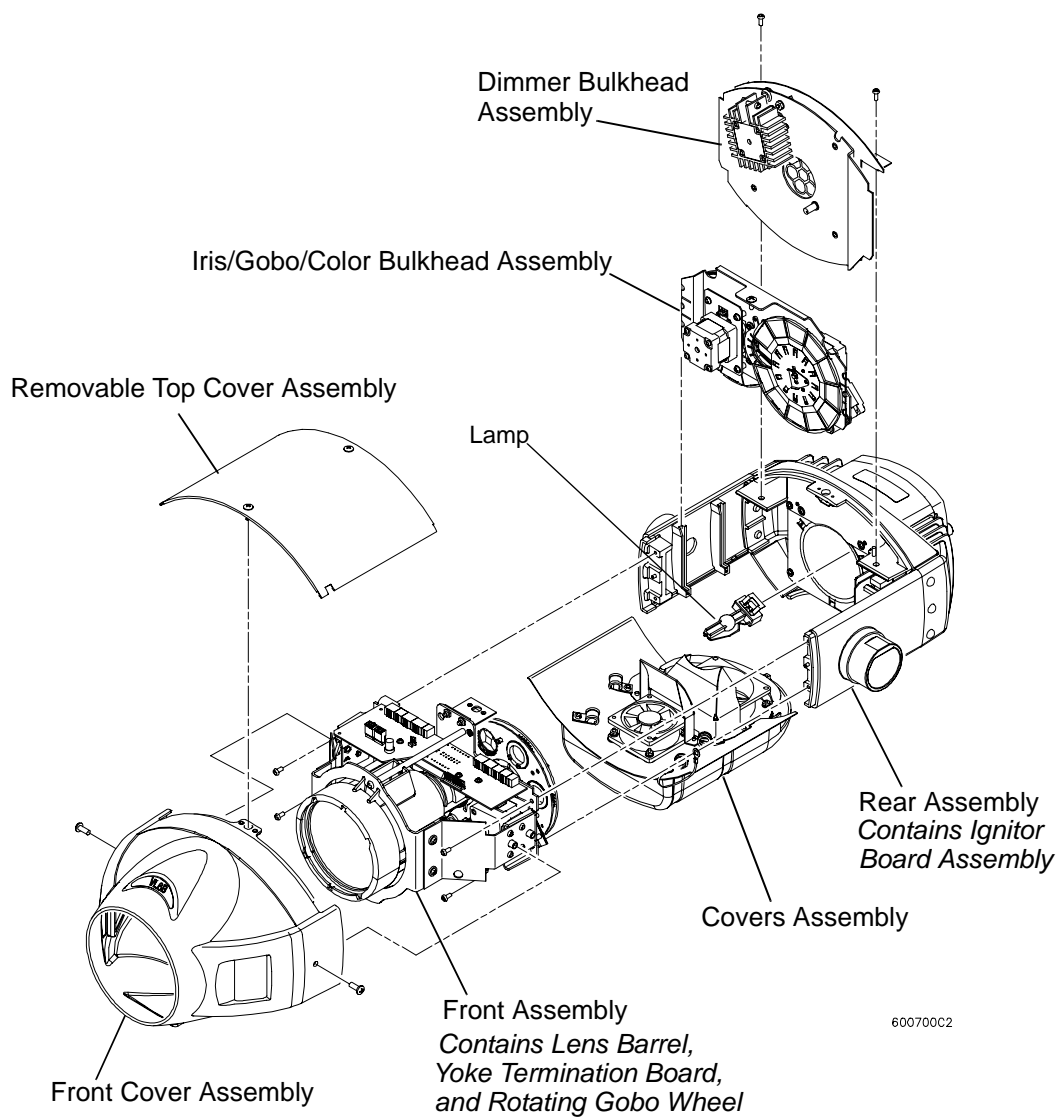
VL6 Luminaire Head Components

The following illustration shows the major sub-assemblies located in the VL6 spot luminaire head assembly.



VL6B/VL6C Luminaire Head Components

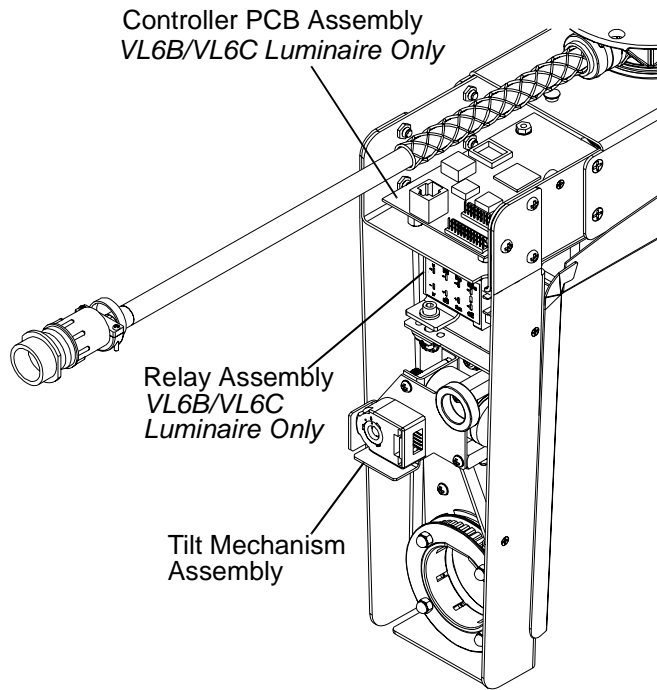
The following illustration shows the major sub-assemblies located in the VL6B/VL6C spot luminaire head assembly.



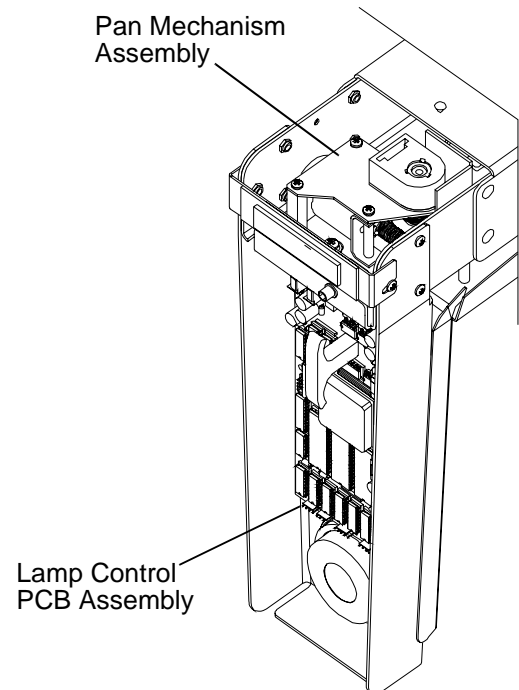
NOTE:
VL6B shown.

Yoke Components

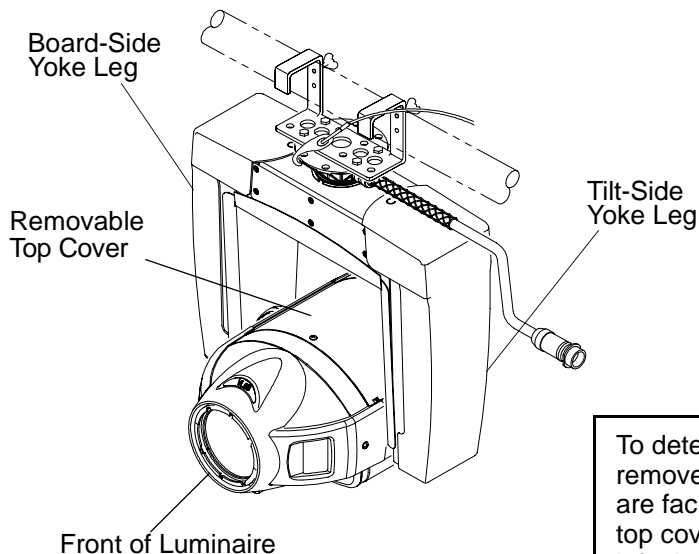
The following illustration shows the major sub-assemblies located in the VL6 series spot luminaire yoke assemblies.



Tilt-side Yoke Leg



Board-side Yoke Leg



To determine which yoke leg is which without having to remove the covers, position the luminaire so that you are facing the front of the luminaire with the removable top cover facing up. The board-side yoke leg is to the left; the tilt-side yoke leg is to the right.

Operation Overview

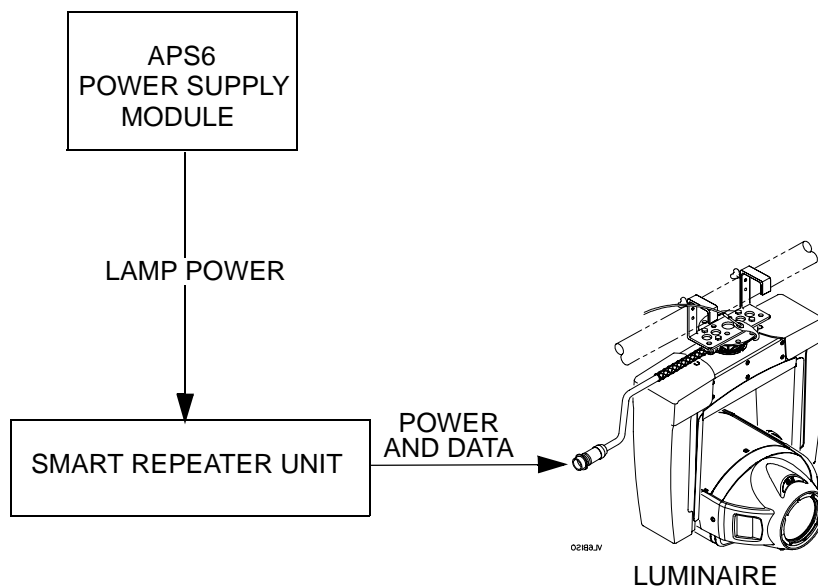
External Power and Data Distribution

Control data signals, 24Vdc, and lamp power are provided by Smart Repeater™ processing units to Series 300™ luminaires (including VL6 series luminaires) via lamp cables. Lamp power is provided by APS6™ power supply modules located in a Modular Rack.

Refer to the Interface Devices Service Manual (02.5014.0010) for more detailed operating and power distribution information.

Refer to the Artisan® System (02.3004.0200), Virtuoso System (02.3004.0400), or DMX (02.3004.0300.52) Installation and Checkout Manuals for complete instructions on connecting luminaires to the system.

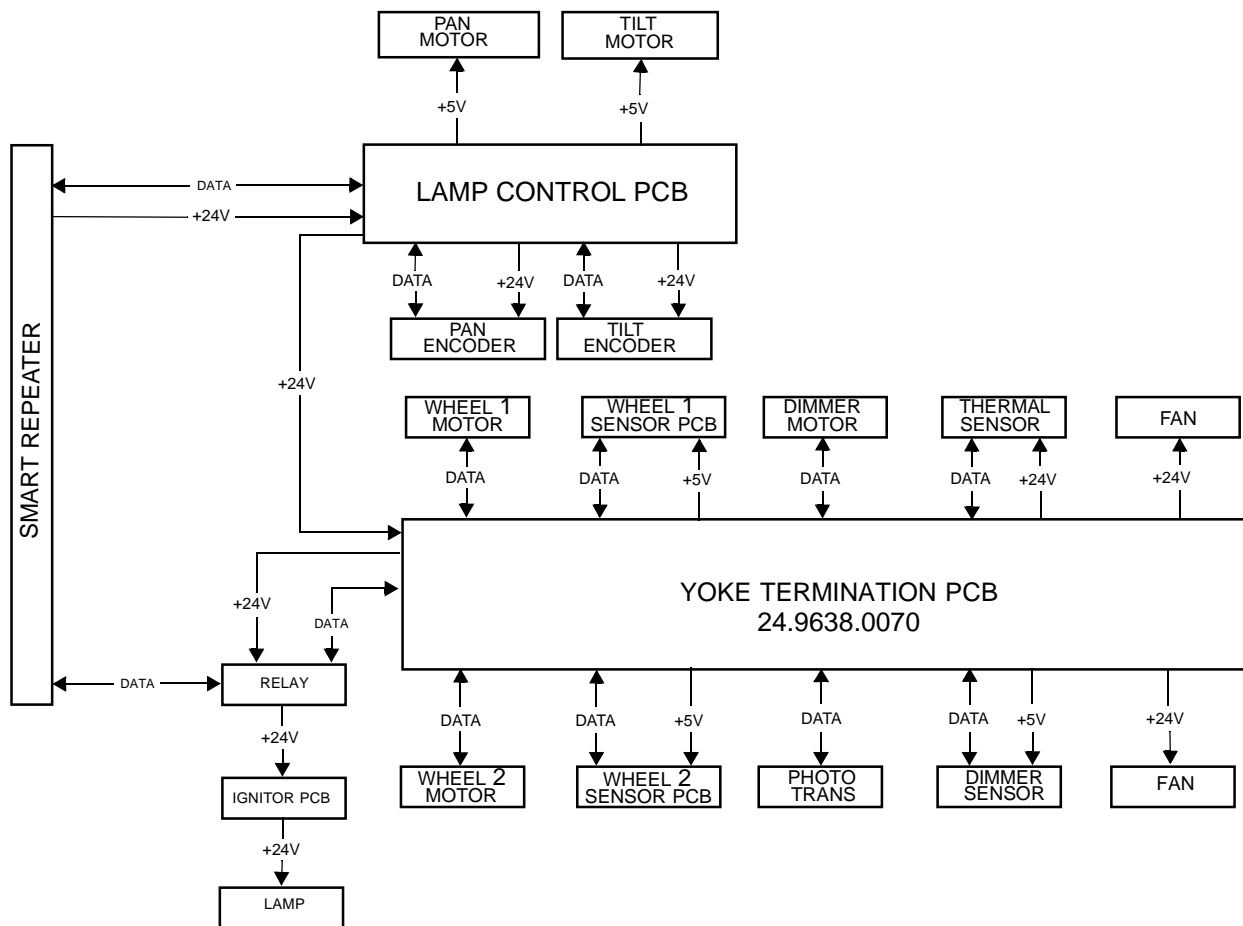
The following diagram shows how data and power are distributed to the VL6 series spot luminaires.



Internal Power and Data Distribution

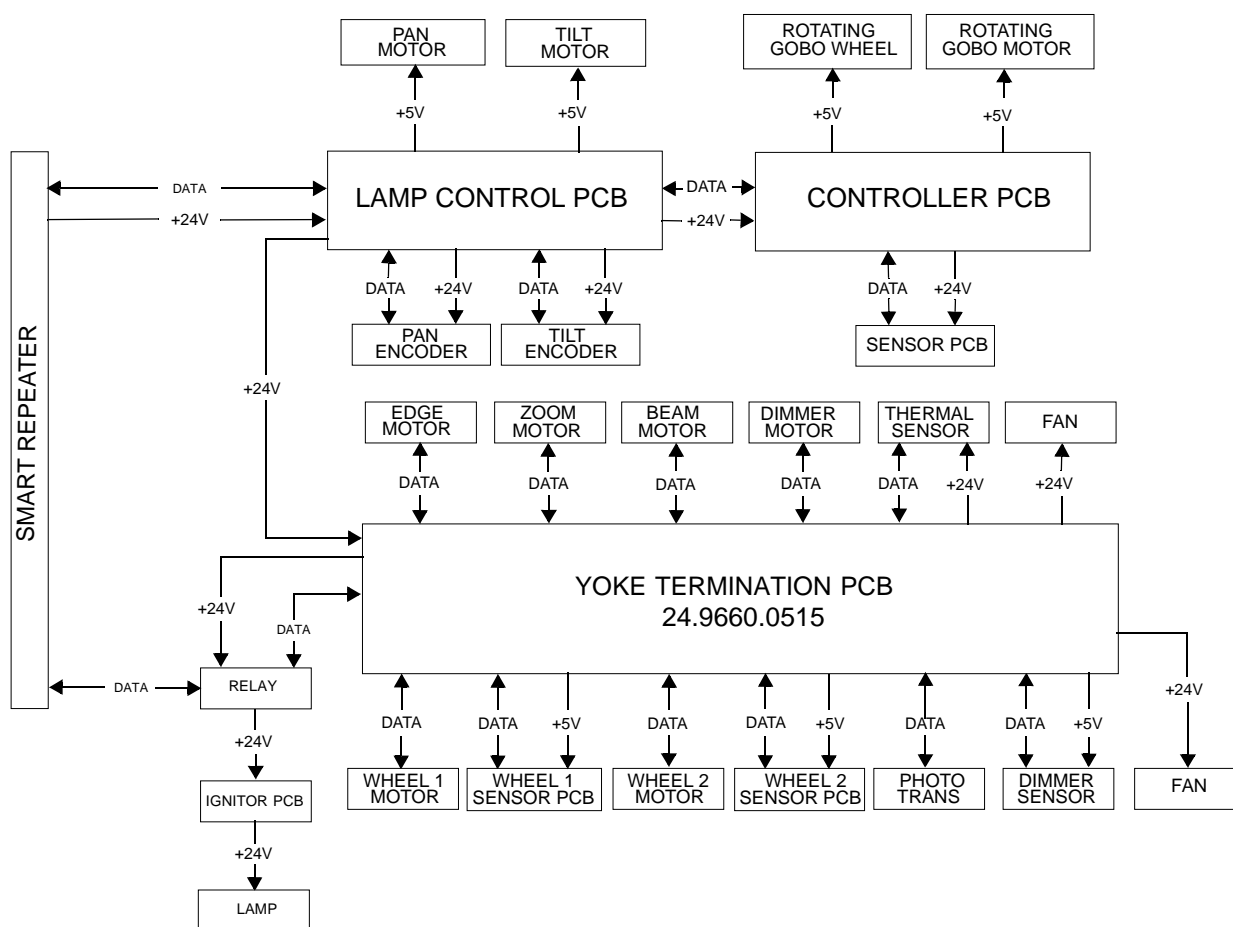
VL6 Luminaire

The following diagram shows how data and power are distributed within the VL6 spot luminaire.



VL6B/VL6C Luminaires

The following diagram shows how data and power are distributed within the VL6B/VL6C spot luminaires.



CHAPTER 2.

Maintenance

This chapter contains test, service, and standard maintenance procedures.

- **Equipment Handling**
- **Testing**
- **Maintenance Procedures**

Equipment Handling

Solid State Electronics

Electrostatic discharge (ESD) presents a significant danger to solid state electronic components (semiconductor devices and printed circuit board (PCB) assemblies). Static electricity can build on a variety of common objects (including people) simply by handling or moving. ESD rarely results in immediate failure of a component, but shows up later as an intermittent problem or severely reduces the life of the component. All VARI**LITE* equipment uses solid state electronics, and appropriate precautions to protect should be observed when servicing.

All parts in the following VARI**LITE* part number groups should be considered ESD sensitive:

23-Electrical assemblies

24-PCB assemblies

80-Transistor

81-Thyristors

82-Diodes

83-IC's:linear

84-IC's:digital

85-IC's:interface

86-Optoelectronic devices

87-Firmware

88-Light emitting diodes (LEDs), displays

All PCBs should be shipped in electrostatic shielding bags. When handling PCBs or components, devices such as conductive mats and conductive wrist straps should be used whenever possible. If these precautionary devices are not available, handling of PCBs and components should be avoided.



CAUTION: Black foam (used to package solid state electronics) should never be used for packing batteries or put in contact with PCBs which contain batteries.

Testing

Test Software

VL6 series spot luminaire functions are tested using the Smart Repeater™ processing unit. The Smart Repeater unit contains test software stored in its EPROMs for the purpose of testing all Series 300 luminaires, which includes the VL6 series luminaires.

The following tables are taken from the Interface Devices Service Manual (02.5014.0010) and reprint test numbers, parameters, error codes, and comments for running luminaire tests. For more detailed instructions on using the Smart Repeater to test luminaires, refer to the Interface Devices Service Manual.

Note: Test numbers not listed are not valid.



CAUTION: Tests should not be run for more than 30 seconds, as this can further damage the luminaire. Any tests run at FULL SPEED should not be run for more than 15 seconds.

Table 2-1: VL6 Spot Luminaire Mechanical Tests

Test Number		Test Parameter		Error Codes/Comments	
000	Start Test	9	End Stop (Open)	103	No Reset (Pan)
001	Pan Test	8	End Stop (Clsd)	203	No Reset (Tilt)
002	Tilt Test	7	Speed 1 (25%)	104	No Reset (Pan)
004	Edge Test	6	Speed 2 (35%)	204	No Reset (Tilt)
		5	Speed 3 (45%)		
		4	Speed 4 (55%)		
		3	Speed 5 (65%)		
		2	Speed 6 (75%)		
		1	Speed 7 (85%)		
		0	Speed 8 (Full Speed)		
005	Intensity Test	9	End Stop (Open)	511	Hit Sensor When Not Expecting To.
		8	End Stop (Clsd)	514	Did Not Hit Sensor When Expecting To.
		7	Speed 1 (25%)		
		6	Speed 2 (35%)		
		5	Speed 3 (45%)		
		4	Speed 4 (55%)		
		3	Speed 5 (65%)		
		2	Speed 6 (75%)		
		1	Speed 7 (85%)		
		0	Speed 8 (Full Speed)		

Table 2-2: VL6 Spot Luminaire Mechanical Tests (cont.)

Test Number		Test Parameter		Error Codes/Comments	
006	Wheel 1 Test	9	CW 1 Frame to Sensor	611	Hit Sensor When Not Expecting To (WH1)
007	Wheel 2 Test	8	CCW 1 Frame to Sensor (Oscillating)	614	Did Not Hit Sensor When Expecting To (WH2)
		7	CW 1 Frame to Sensor (Oscillating)	711	Hit Sensor When Not Expecting To (WH2).
		6	CCW 1 Frame to Sensor (Oscillating)	714	Did Not Hit Sensor When Expecting To (WH2).
		5	Continuous Frame Step		Direction Opposite Of Spin.
		4	Speed 1 spin		
		3	Speed 2 spin		Spin Speeds Match Those
		2	Speed 3 spin		Achievable From Console.
		1	Speed 4 spin		
		0	Speed 5 Spin (Full Speed)		Spin Speeds match those available from console
012	All Motors (synchronized)				
013	All Motors (unsynchronized)				
912	End Motor (in cal. position)				

Table 2-3: VL6 Spot Luminaire Default Programs

Test Number		Test	Functions
31	Pan and Tilt	701	Pan 25% Speed
		702	Tilt 25% Speed
39	VL6 Functions	703	Beam 25% Speed
		705	Edge 25% Speed
		706	Wheel 1 Continuous Frame
		707	Wheel 2 Continuous Frame

Table 2-4: VL6B/VL6C Spot Luminaire Mechanical Tests

Test Number		Test Parameter		Error Codes/Comments	
000	Start Test	9	End Stop (OPEN)	103	No Reset (PAN)
001	Pan Test	8	End Stop (CLOSED)	203	No Reset (TILT)
002	Tilt Test	7	Speed 1	104	No Reset (PAN)
003	Beam Test	6	Speed 2	204	No Reset (TILT)
		5	Speed 3 (45%)		
		4	Speed 4 (55%)		
		3	Speed 5 (65%)		

Table 2-4: VL6B/VL6C Spot Luminaire Mechanical Tests (Continued)

Test Number		Test Parameter		Error Codes/Comments	
		2	Speed 6 (75%)		
		1	Speed 7 (85%)		
		0	Speed 8 (FULL SPEED)		
004	Lens Test	7	All move to front EOT, Lens 1 cycles full travel (100%)		
		6	Lens 1 move to rear EOT, Lens 3 move to front EOT, Lens 2 cycles full travel (33%)		
		5	Lens 1 move to rear EOT, Lens 3 move to front EOT, Lens 2 cycles full travel (66%)		
		4	Lens 1 move to rear EOT, Lens 3 move to front EOT, Lens 2 cycles full travel (100%)		
		3	All lenses move to rear EOT, Lens 3 cycles full travel (33%)		
		2	All lenses move to rear EOT, Lens 3 cycles full travel (66%)		
		1	All lenses move to rear EOT, Lens 3 cycles full travel (100%)		
		0	All synchronous (100%)		
005	Intensity Test	9	End Stop (OPEN)	511	Hit Sensor When Not Expecting To
		8	End Stop (CLOSED)	514	Did Not Hit Sensor When Expecting To
		7	Speed 1 (25%)		
		6	Speed 2 (35%)		
		5	Speed 3 (45%)		
		4	Speed 4 (55%)		
		3	Speed 5 (65%)		
		2	Speed 6 (75%)		
		1	Speed 7 (85%)		
		0	Speed 8 (FULL SPEED)		
006	Wheel 1 Test	9	CW 1 Frame To Sensor	611	Hit Sensor When Not Expecting To
007		8	CCW 1 Frame To Sensor	614	Did Not Hit Sensor When Expecting To
		7	CW 1 Frame To Sensor (Osculating)	711	Hit Sensor When Not Expecting To
		6	CCW 1 Frame To Sensor (Osculating)	714	Did Not Hit Sensor When Expecting To
		5	Continuous Frame Step		Direction Opposite of Spin
		4	Speed 1 Spin		
		3	Speed 2 Spin		
		2	Speed 3 Spin		

Table 2-4: VL6B/VL6C Spot Luminaire Mechanical Tests (Continued)

Test Number		Test Parameter		Error Codes/Comments	
		1	Speed 4 Spin		
		0	Speed 5 Spin (Full Speed)		Spin Speeds match those available from Console
009	Rotating Gobos	9	Wheel position is open (no gobo)		
		8	Gobo position 6		
		7	Cycle from wheel position 0 to position 3 CW, from position 3 to position 0 CCW repeatedly. Pause briefly on position 0 and 3		
		6	Cycle from wheel position 0 to position 2 CW, from position 2 to position 0 CW repeatedly. Pause briefly on position 0 and 2		
		5	Continuous change CW to next gobo position on wheel (from 2 to 3, 5 to 0) Gobos on wheels do not rotate. Pause briefly on each gobo.		
		4	Cycle from wheel position 0 to position 2 CCW, from position 2 to position 0 CW repeatedly. Pause briefly on position 0 and 2 (25%)		
		3	Cycle from wheel position 0 to position 2 CCW, from position 2 to position 0 CW repeatedly. Pause briefly on position 0 and 2 (45%)		
		2	Cycle from wheel position 0 to position 2 CCW, from position 2 to position 0 CW repeatedly. Pause briefly on position 0 and 2 (65%)		
		1	Cycle from wheel position 0 to position 2 CCW, from position 2 to position 0 CW repeatedly. Pause briefly on position 0 and 2 (85%)		
		0	Cycle from wheel position 0 to position 2 CCW, from position 2 to position 0 CW repeatedly. Pause briefly on position 0 and 2 (100%)		
010	Index	9	Cycle from index 0 to index 30 CW, from index 30 to index 0 CCW repeatedly. Pause briefly on index 0 and 30 (85%)		
		8	Cycle from index 0 to index 5 CCW, from index 5 to index 0 CW repeatedly. Pause briefly on index 0 and 5		
		7	Cycle from index 0 to index 3 CW, from index 3 to index 0 CCW repeatedly. Pause briefly on index 0 and 3		

Table 2-4: VL6B/VL6C Spot Luminaire Mechanical Tests (Continued)

Test Number		Test Parameter		Error Codes/Comments	
		6	Cycle from index 0 to index 6 CW, from index 6 to index 0 CCW repeatedly. Pause briefly on index 0 and 6		
		5	Continuous Stop/Start through 14 different index positions		
		4	Continuous Rotation Speed 25%		
		3	Continuous Rotation Speed 45%		
		2	Continuous Rotation Speed 65%		
		1	Continuous Rotation Speed 85%		
		0	Continuous Rotation Speed 100%		
012	All Motors (synchronized)				
013	All Motors (unsynchronized)				
912	End Motor (in cal. position)				

Table 2-5: VL6B/VL6C Spot Luminaire Default Test Programs

Test Number		Test	Functions
31	Pan and Tilt	701	Pan 25% Speed
		702	Tilt 25% Speed
39	VL6B Functions	703	Beam 25% Speed
		705	Edge 25% Speed
		706	Wheel 1 Continuous Frame
		707	Wheel 2 Continuous Frame
		709	Rotating Gobos

Maintenance Procedures

Head Assembly

This section provides removal and replacement procedures for components found in the luminaire head assembly.

VL6/VL6B/VL6C Lamp Replacement

Parts:

71.2528.0400 1 EA LAMP, 400 WATT SHORT ARC (**VL6/VL6B**)
71.2528.0700 1 EA LAMP, 700 WATT ARC - PHILLIPS MSR700 (**VL6C**)

Tools:

Screwdriver, #2 Phillips
Cotton gloves

To remove and replace lamp:



WARNING: All maintenance procedures are to be performed with power removed from the luminaire. Never remove covers or open front lens or back cap assemblies while lamp is in operation.

Step 1. Disconnect luminaire AC input cable from power source.



WARNING: Allow lamp to cool before replacing.

Step 2. At back cap, using #2 Phillips screwdriver or fingers, turn captive knob until loose. **Figure 2-1.**

Step 3. Slide back cap away from head assembly (it will remain attached by tether).



CAUTION: Wear cotton gloves or other covering while servicing lamp. Touching lamp glass with bare fingers will leave oil and cause the lamp to explode or burn out early. If touched, use alcohol to thoroughly clean glass.

Step 4. Remove lamp by pulling straight out of socket.

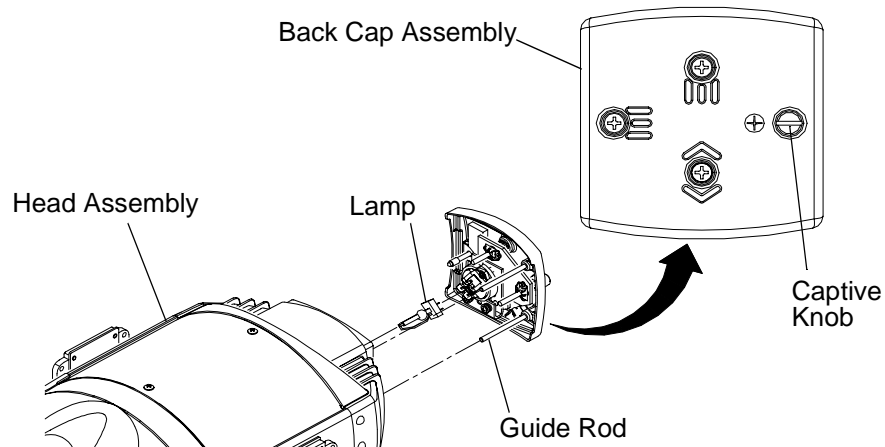


Figure 2-1: Lamp Replacement

- Step 5. Install new lamp, pressing firmly into socket.
- Step 6. Align guide rods in guide holes and slide back cap into head assembly.
- Step 7. Re-tighten captive knob.
- Step 8. Align lamp. (Refer to next procedure.)

VL6/VL6B/VL6C Align Lamp for Peaked or Flat Field

The design of the VL6 and VL6B luminaire optical systems are based on a peaked or flat field. The design of the VL6C luminaire optical system is based on an optimally flat field.

A peaked field is one where the intensity of the beam is significantly greater at the center of the beam than at the perimeter. At this position, the center beam intensity is maximized. The beam fall-off ratio can be reduced by repositioning the lamp by adjusting the focus knob. This results in a beam with a flattened appearance.

A flat field is one where there is no detectable hot spot.

After a new lamp is installed, it will be necessary to align the lamp to optimize the beam for either the peaked or flat field (depending on the luminaire model). Knobs located at the luminaire's back cap allow adjustment.



WARNING: Back cap and adjustment knobs will be HOT during lamp operation. Wear gloves and/or use tools to prevent burns.

To align lamp:

- Step 1. Power up luminaire and allow to warm up for ten minutes.
- Step 2. Set intensity to 100%.
- Step 3. Position beam on a white wall at a distance of 10' to 20'.

- Step 4. Using control console, open beam size iris and focus for hard edge.
- Step 5. At back cap, using vertical and horizontal knobs, adjust hot spot to center of beam. **Figure 2-2.**
- Step 6. Using focus knob, do one of the following:
- For peaked field, adjust hot spot for maximum center beam intensity.
 - For flat field, adjust beam for best spot.

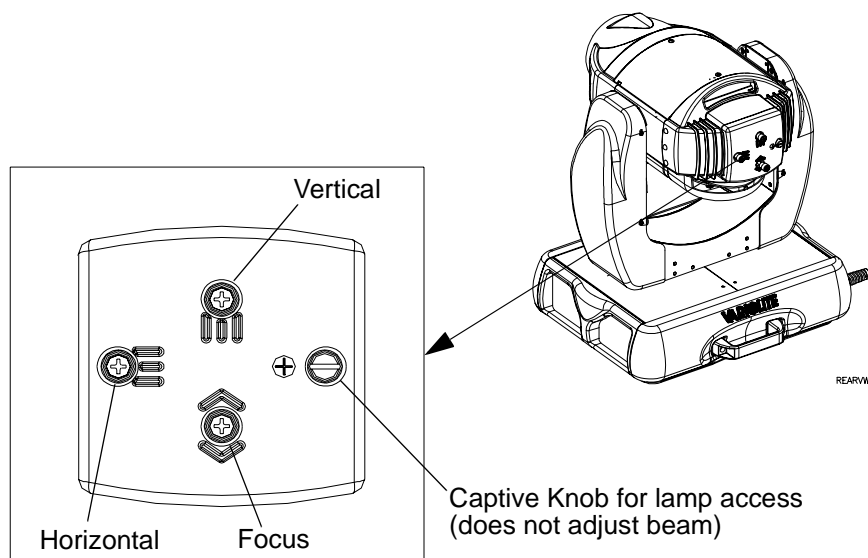


Figure 2-2: Lamp Alignment

VL6/VL6B/VL6C Color Bulkhead Assembly Replacement

Parts:

22.9638.0076 1 EA BULKHEAD ASSY, COLOR (VL6)

22.9660.0164 1 EA BULKHEAD ASSY, IRIS/GOBO/COLOR (VL6B/VL6C)

Tools:

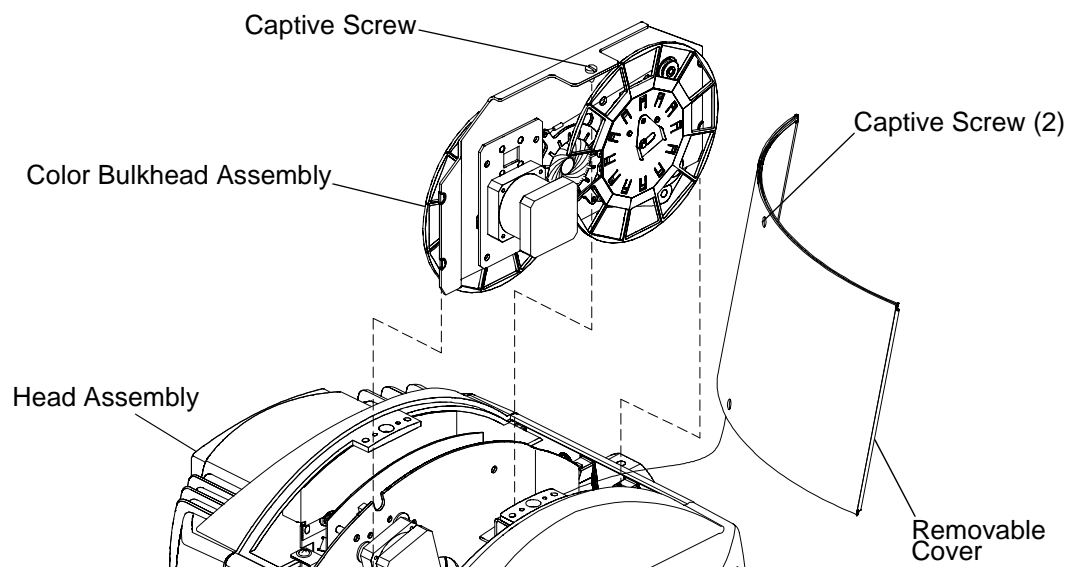
Screwdriver, #2 Phillips

To remove and replace color bulkhead assembly:

WARNING: All maintenance procedures are to be performed with power removed from the luminaire.

Step 1. Disconnect luminaire AC input cable from power source.

Step 2. At head assembly, using #2 Phillips screwdriver, turn two captive screws one-quarter turn and remove cover (It will remain attached by tether.).

Figure 2-3.**Figure 2-3: Color Bulkhead Assembly Replacement**

Step 3. At front assembly, disconnect the following MTA receptacles from yoke termination printed circuit board (PCB):

- a. Wheel 1 (gobo) motor MTA receptacle from WHL1.
- b. Wheel 1 sensor MTA receptacle from WHL1 SENS.
- c. Beam size iris motor MTA receptacle from BEAM.
- d. Wheel 2 (filter) motor MTA receptacle from WHL2.
- e. Wheel 2 sensor MTA receptacle from WHL2 SENS.

- Step 4. At color bulkhead assembly, using #2 Phillips screwdriver, turn captive screw one-quarter turn to release bulkhead.
- Step 5. Remove color bulkhead assembly from head assembly.
- Step 6. Install replacement color bulkhead assembly by performing Steps 2–5 in reverse order.

VL6/VL6B/VL6C Standard Gobo or Color Filter Replacement

Parts:

Standard Gobo or Color Filter, as required

Tools:

Screwdriver, #2 Phillips

Cotton gloves

To remove and replace a standard gobo or color filter:



WARNING: All maintenance procedures are to be performed with power removed from the luminaire.

Step 1. Disconnect luminaire AC input cable from power source.

Step 2. At head assembly, using #2 Phillips screwdriver, turn two captive screws one-quarter turn and remove cover (It will remain attached by tether.).

Figure 2-3.

Note: In some cases it is easier to slide color bulkhead assembly partially out of head assembly to access gobo and color filters.

Step 3. If required, slide color bulkhead assembly out of head assembly. Refer to **“VL6/VL6B/VL6C Color Bulkhead Assembly Replacement” on page 23.**

Step 4. Rotate wheel until gobo or color filter is accessible.



CAUTION: Do not touch gobo or color filters with bare fingers. Wear cotton gloves or other covering while replacing.

Step 5. Using fingers, grasp frame of gobo or color filter and pull out of wheel hub.

Figure 2-4.

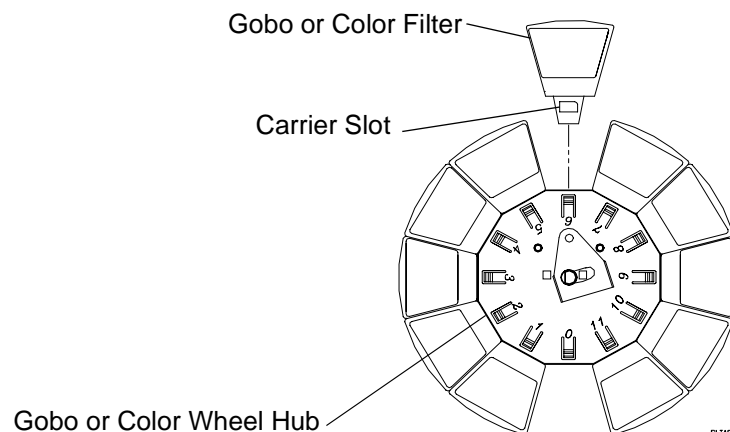


Figure 2-4: Standard Gobo or Color Filter Replacement

- Step 6. Noting proper orientation of carrier slot, insert new color filter into position and push fully into place.
- Step 7. Re-install color bulkhead assembly, as required. Refer to **“VL6/VL6B/VL6C Color Bulkhead Assembly Replacement” on page 23.**
- Step 8. Using #2 Phillips screwdriver, re-install removable cover by positioning cover on head assembly and tightening two captive screws. **Figure 2-3.**

VL6/VL6B/VL6C Dimmer Bulkhead Assembly Replacement

Parts:

22.9638.0082 1 EA BULKHEAD ASSY, DIMMER

Tools:

Screwdriver, #2 Phillips

To remove and replace dimmer bulkhead assembly:

WARNING: All maintenance procedures are to be performed with power removed from the luminaire.

- Step 1. Disconnect luminaire AC input cable from power source.
- Step 2. At head assembly, using #2 Phillips screwdriver, turn two captive screws one-quarter turn and remove cover. (It will remain attached by tether.) **Figure 2-5.**
- Step 3. At front assembly, disconnect the following MTA receptacles from yoke termination PCB:
- a. Dimmer motor MTA receptacle from DIM.
 - b. Dimmer motor sensor (optical switch) MTA receptacle from DIM EOT.
 - c. Dimmer bulkhead thermal switch MTA receptacle from T1 (VL6) or TS (VL6B/VL6C).
 - d. Photo transistor MTA receptacle from P.T. (VL6) or PHOTO TRANS (VL6B/VL6C).
- Step 4. At dimmer bulkhead assembly, using #2 Phillips screwdriver, remove two 6-32 X 3/8" PPZ screws and two #6 lock washers (washers in VL6 luminaire only) securing dimmer bulkhead assembly to rear assembly. **Figure 2-5.**
- Step 5. Slide dimmer bulkhead assembly from rear assembly.
- Step 6. Install replacement dimmer bulkhead assembly by performing Steps 2–5 in reverse order.

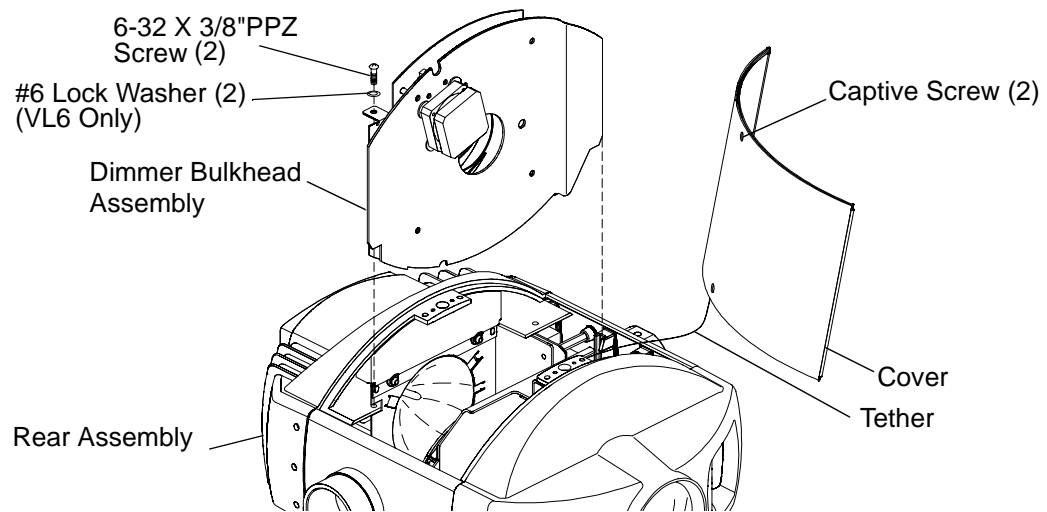


Figure 2-5: Dimmer Bulkhead Assembly Replacement

VL6 Luminaire Front Assembly Replacement

Parts:

22.9638.0095 1 EA FRONT ASSY, VL6

Tools:

Screwdriver, #2 Phillips

To remove and replace VL6 luminaire front assembly:

WARNING: All maintenance procedures are to be performed with power removed from the luminaire.

- Step 1. Disconnect luminaire AC input cable from power source.
- Step 2. Remove color bulkhead assembly. Refer to **“VL6/VL6B/VL6C Color Bulkhead Assembly Replacement” on page 23.**
- Step 3. At front assembly, disconnect the following dimmer bulkhead MTA receptacles from yoke termination PCB:
- a. Dimmer motor MTA receptacle from DIM.
 - b. Dimmer motor sensor (optical switch) MTA receptacle from DIM EOT.
 - c. Dimmer bulkhead thermal switch MTA receptacle from T1.
 - d. Photo transistor MTA receptacle from P.T.
 - e. Two fan covers assembly MTA receptacles from F1 and F2 .
 - f. Yoke cable assembly MTA receptacle.
 - g. Lamp assembly MTA receptacle from IGN.
- Step 4. At front of bulkhead, using #2 Phillips screwdriver, remove two 10-32 X 3" PPZ screws and remove front assembly from head assembly. **Figure 2-6.**
- Step 5. Re-install front assembly by performing Steps 2–4 in reverse order.

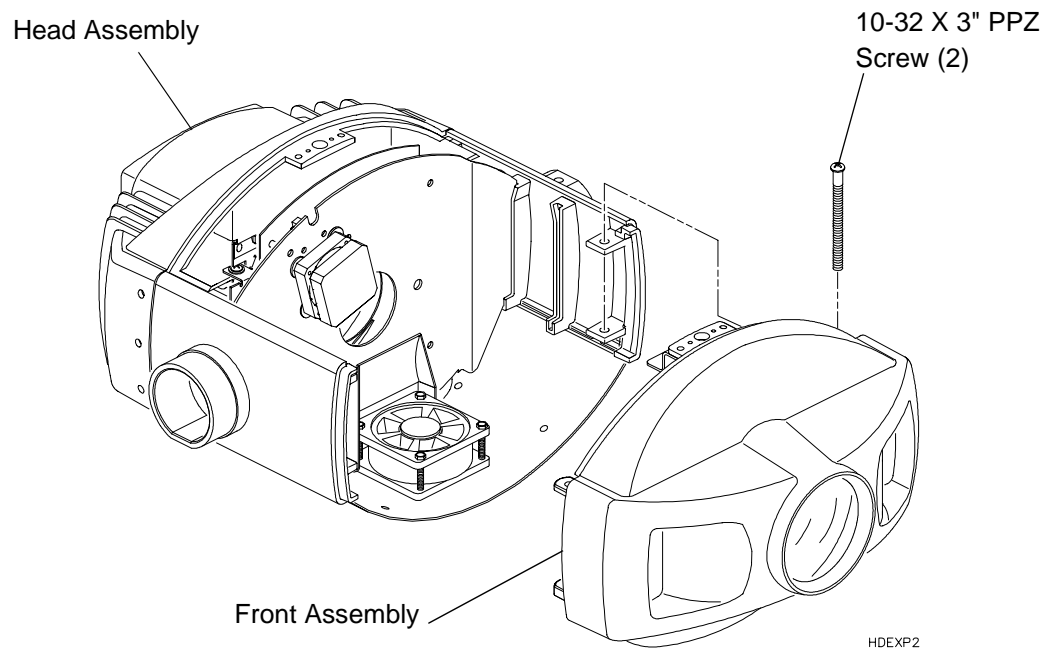


Figure 2-6: VL6 Luminaire Front Assembly Replacement

VL6B/VL6C Front Assembly Replacement

Parts:

22.9660.0305 1 EA ASSY, FRONT, VL6B/VL6C

Tools:

Screwdriver, #2 Phillips, long handle

Screwdriver, #2 Phillips

To remove and replace VL6B/VL6C luminaire front assembly:

WARNING: All maintenance procedures are to be performed with power removed from the luminaire.

- Step 1. Disconnect luminaire AC input cable from power source.
- Step 2. Remove color bulkhead assembly. Refer to **“VL6/VL6B/VL6C Color Bulkhead Assembly Replacement”** on page 23.
- Step 3. At front cover assembly, using #2 Phillips screwdriver, remove two 10-32 X 1/2" PPB screws (one on each side) and remove front cover assembly.
- Figure 2-7.**

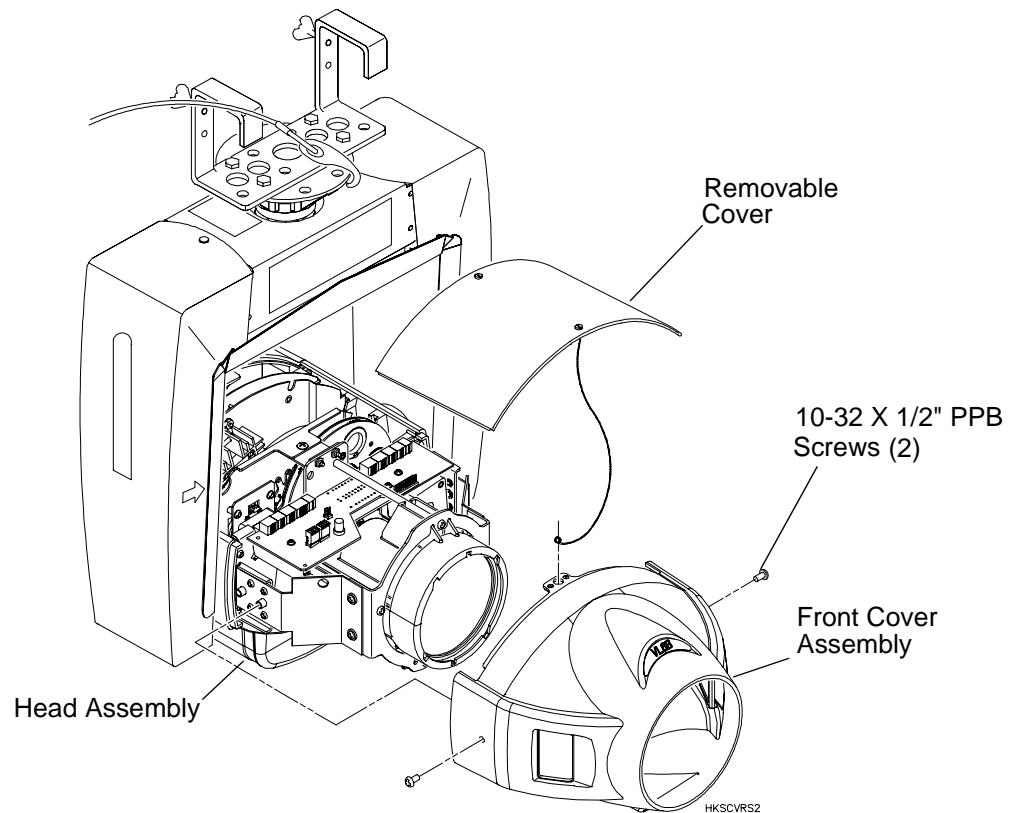


Figure 2-7: Removing VL6B/VL6C Luminaire Front Cover Assembly

- Step 4. At yoke termination PCB, disconnect the following MTA receptacles:
- a. Dimmer motor MTA receptacle from DIM.
 - b. Dimmer motor sensor (optical switch) MTA receptacle from DIM EOT.
 - c. Dimmer bulkhead thermal switch MTA receptacle from TS.
 - d. Relay cable assembly MTA receptacle from RELAY.
 - e. Motor harness cable assembly MTA receptacle from FOCUS MOTORS.
 - f. Photo Sensor MTA receptacle from PHOTO TRANS.
 - g. Two fan covers assembly MTA receptacles from FAN on back of PCB.
 - h. Yoke cable assembly receptacle from J7.
 - i. Lamp assembly MTA receptacle from DISC.
- Step 5. At front assembly, disconnect wire connectors from rotating gobo index motor and rotating gobo wheel motor.
- Step 6. At front of bulkhead, using #2 Phillips long handle screwdriver, remove four 6-32 X 5/16" PPB screws, and pull front assembly partially out of head assembly. **Figure 2-8.**

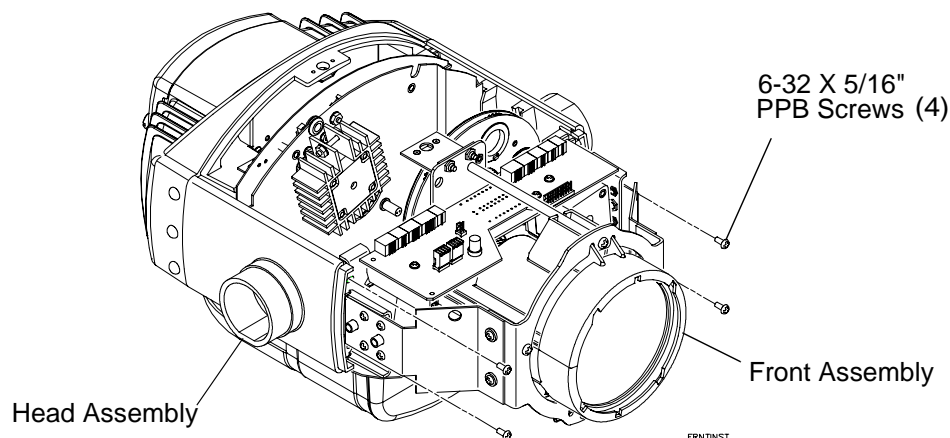


Figure 2-8: VL6B/VL6C Luminaire Front Assembly Replacement

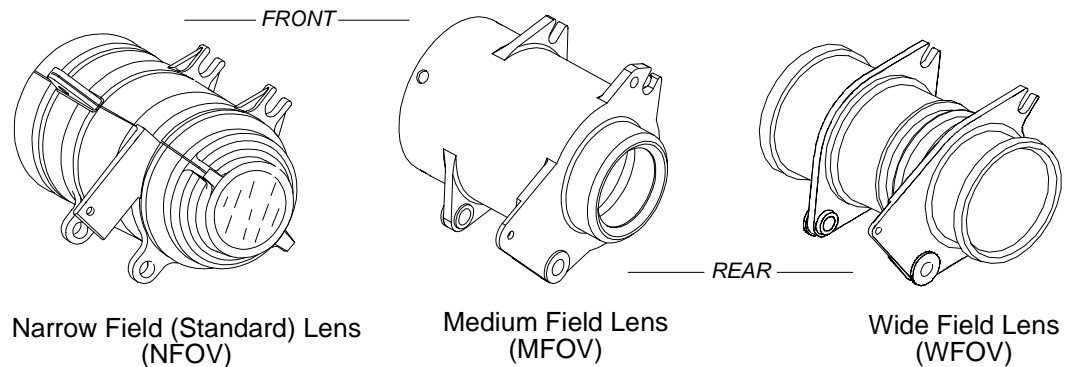
- Step 7. At front assembly, disconnect sensor cable assembly MTA receptacle from rotating gobo sensor PCB.
- Step 8. Remove front assembly.
- Step 9. Re-install front assembly by performing Steps 2–8 in reverse order.

VL6 Lens Assembly Replacement

Optional Lenses

Two lenses are available to replace the standard narrow field of view (NFOV) lens.

- Medium field of view (MFOV) lens - moderately increased beam coverage.
- Wide field of view (WFOV) lens - maximum beam coverage.



To remove and replace VL6 luminaire lens assembly:

Parts:

As Required:

22.9638.0081	1 EA	ASSY, NARROW ANGLE LENS
22.9638.0208	1 EA	ASSY, MEDIUM ANGLE LENS
22.9638.0167	1 EA	ASSY, WIDE ANGLE LENS
54.2007.0001	2 EA	RETAINING RING, EXTERNAL 1/4" SHAFT DIA
10.9638.0188	1 EA	COUNTERWEIGHT, WIDE ANGLE LENS

Tools:

As Required:

Screwdriver, #2 Phillips
 Nutdriver, 1/4"
 Pliers, needle nose
 Pliers, snap ring
 Versilube (06.6027.0001)
 Drill with 3/16" drill bit
 White cotton gloves or finger cots



WARNING: All maintenance procedures are to be performed with power removed from the luminaire.

- Step 1. Disconnect luminaire AC input cable from power source.
- Step 2. Remove front assembly. Refer to **“VL6 Luminaire Front Assembly Replacement”** on page 29.
- Step 3. At front assembly lens stepper motor, using 1/4" nutdriver and needle nose pliers, remove one 4-40 SS nylon hex nut and two #4 flat washers, securing lens assembly to stepper motor shaft. **Figure 2-9.**

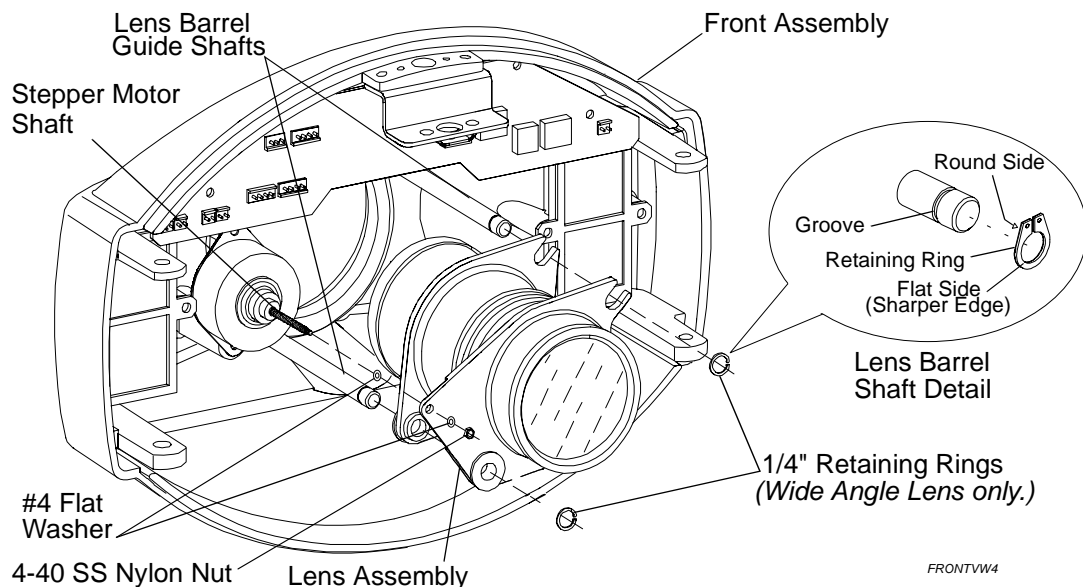


Figure 2-9: VL6 Luminaire Lens Assembly Replacement

- Step 4. Remove lens assembly:
- For WFOV lenses only*, at lens barrel guide shafts, using snap ring pliers, remove two 1/4" retaining rings, and remove lens assembly. (Discard rings.)
 - For NFOV and MFOV lenses*, remove lens assembly (retaining rings not used).

Note: If replacing MFOV or WFOV lens with narrow field lens, the counterweight must also be removed.

- Step 5. Perform one of the following:
- If replacing MFOV or WFOV lens with narrow field lens, proceed to step 6 to remove counterweight.
 - If replacing same type lens, proceed to Step 7.

Step 6. Remove counterweight **Figure 2-10**.

- a. At back cap, using #2 Phillips screwdriver or fingers, turn captive knob until loose.
- b. Slide back cap away from head assembly (it will remain attached by tether).
- c. Using # 2 Phillips screwdriver, remove counterweight by removing one 10-32 X 7/8" PPB screw and one 10-32 KEPS nut.
- d. Align guide rods in guide holes and slide back cap into head assembly.
- e. Re-tighten captive knob.

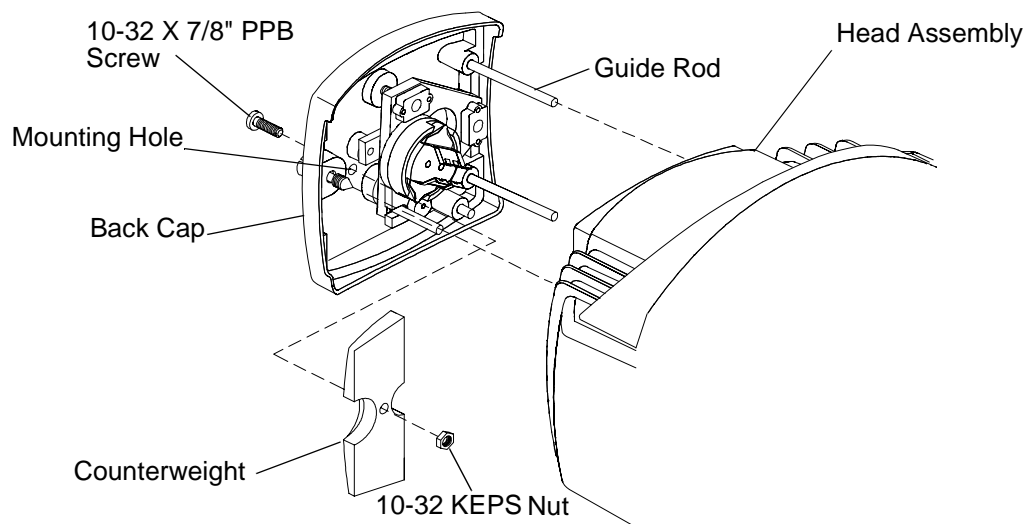


Figure 2-10: Removing Counterweight

Step 7. Install lens assembly:

- a. If installing wide or medium field lens assembly, proceed to step 8.
- b. If installing narrow field lens assembly, before installing lens assembly perform steps 2 through 13 of **“VL6 NFOV Lens Assembly Dust Prevention and Lens Cleaning”** on page 61, then proceed to step 8.

Step 8. Apply small amount of Versilube to both lens barrel shafts.

Step 9. Slide replacement lens assembly onto lens barrel shafts.



CAUTION: Do not reuse WFOV lens retaining rings removed in Step 4. Upon removal retaining rings become deformed.

Step 10. *For WFOV lenses only*, using snap ring pliers, install two new retaining rings on lens barrel shafts.

Note: The MFOV and WFOV lenses are manufactured from metal rather than plastic and are heavier than the NFOV lens. When replacing a NFOV lens with a MFOV or WFOV lens, a counterweight will need to be installed to maintain luminaire balance.

Step 11. If necessary, install counterweight **Figure 2-10**.

- a. At back cap, using #2 Phillips screwdriver or fingers, turn captive knob until loose.
- b. Slide back cap away from head assembly (it will remain attached by tether).
- c. Using #2 Phillips screwdriver, remove one 6-32 X 5/16" PPZ screw and one #6 flat washer, and disconnect tether.
- d. If back cap does not have a counterweight mounting hole, drill a mounting hole as follows



CAUTION: Wear cotton gloves when handling lamp.

- 1) Carefully remove lamp from lamp socket.
- 2) Place counterweight in back cap, observing proper orientation.
- 3) With counterweight in place, using drill with 3/16" drill bit, drill 0.201" diameter hole through back cap. (Be careful not to damage lamp wires or lamp socket assembly.)
- 4) Re-install lamp in lamp socket.
- e. Using #2 Phillips screwdriver, secure counterweight to back cap with one 10-32 X 7/8" PPB screw and one 10-32 KEPS nut.
- f. Reconnect tether by positioning tether in place on back cap, and using #2 Phillips screwdriver, re-install one 6-32 X 5/16" PPZ screw and one #6 flat washer.
- g. Install new lamp, pressing firmly into socket.
- h. Align guide rods in guide holes and slide back cap into head assembly.
- i. Re-tighten captive knob.
- j. Carefully re-install lamp assembly.

Step 12. Reassemble luminaire by performing Steps 2–3 in reverse order.

VL6B/VL6C Lens Barrel Assembly Replacement

Parts:

21.9673.0230 1 EA ASSY, LENS BARREL VL6B/VL6C

Tools:

Screwdriver, #2 Phillips

Pliers, needle nose

Wrench, 1/4" open-ended

Lube, Dupont Krytox GPL226 (06.1009.0001)

To remove and replace VL6B/VL6C luminaire lens barrel assembly:

WARNING: All maintenance procedures are to be performed with power removed from the luminaire.

- Step 1. Disconnect luminaire AC input cable from power source.
- Step 2. Remove front assembly. Refer to [“VL6B/VL6C Front Assembly Replacement” on page 31](#).
- Step 3. At front assembly, disconnect zoom motor MTA receptacle from yoke termination PCB ZOOM.
- Step 4. At lens barrel assembly, use pliers to hold standoff on edge motor shaft, and using 1/4" open-ended wrench, remove 4-40 SS KEPS nut from end of motor shaft. [Figure 2-11](#).

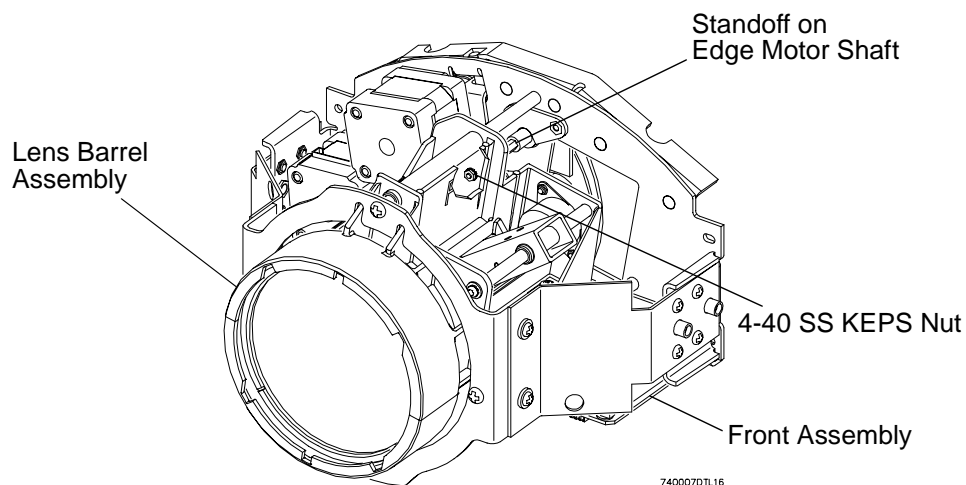


Figure 2-11: Removing Nut From Edge Motor Assembly Shaft

- Step 5. Using #2 Phillips screwdriver, remove 8-32 X 3/8" PPZ screws from shafts (three places) securing optical support ring to shafts. **Figure 2-12.**

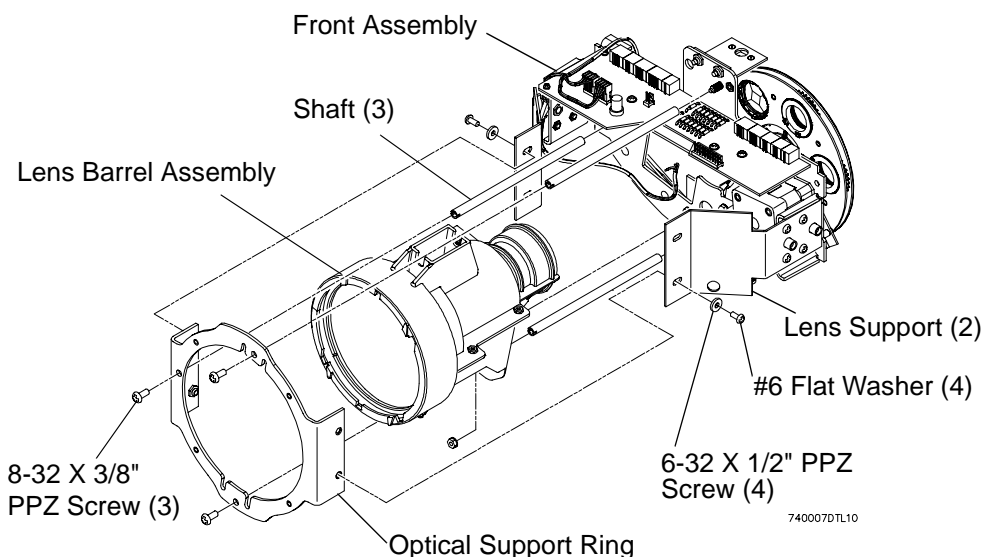


Figure 2-12: Removing Lens Barrel Assembly

- Step 6. At support ring, using #2 Phillips screwdriver, remove four 6-32 X 1/2" PPZ screws and four #6 flat washers, and remove optical support ring from lens supports.
- Step 7. Remove lens barrel assembly by pulling straight out from front assembly along shafts.
- Step 8. Before installing replacement lens barrel assembly, perform steps 2 through 12 of **"VL6 NFOV Lens Assembly Dust Prevention and Lens Cleaning"** on page 61, then proceed to step 9.
- Step 9. Install replacement lens assembly by performing Steps 2–7 in reverse order. Apply lubricant (06.1009.0001) to shafts before installing replacement lens barrel assembly.

VL6 Luminaire Lens Motor Replacement

Parts:

44.9638.0001	1 EA	MOTOR, STEPPER, VL6, HSI 36341
52.6396.2604	1 EA	RECEPT, 4-POS MTA 100 W/POL TAB BLUE 26AWG
52.6424.0004	1 EA	COVER, 4-POS STRAIN RELIEF - MTA

Tools:

Screwdriver, Phillips #2
 Screwdriver, Phillips #1
 Nutdriver, 1/4"
 Pliers, needle nose
 Pliers, snap ring (if removing wide angle lens)
 Diagonal cutter
 MTA crimper
 Permanent ink marker

To remove and replace VL6 luminaire lens motor:



WARNING: All maintenance procedures are to be performed with power removed from the luminaire.

- Step 1. Disconnect luminaire AC input cable from power source.
- Step 2. Remove front assembly. Refer to [“VL6 Luminaire Front Assembly Replacement” on page 29.](#)
- Step 3. Remove lens assembly. Refer to [“VL6 Lens Assembly Replacement” on page 33.](#)
- Step 4. At yoke termination PCB, disconnect motor wires MTA receptacle at LENS. [Figure 2-13.](#)

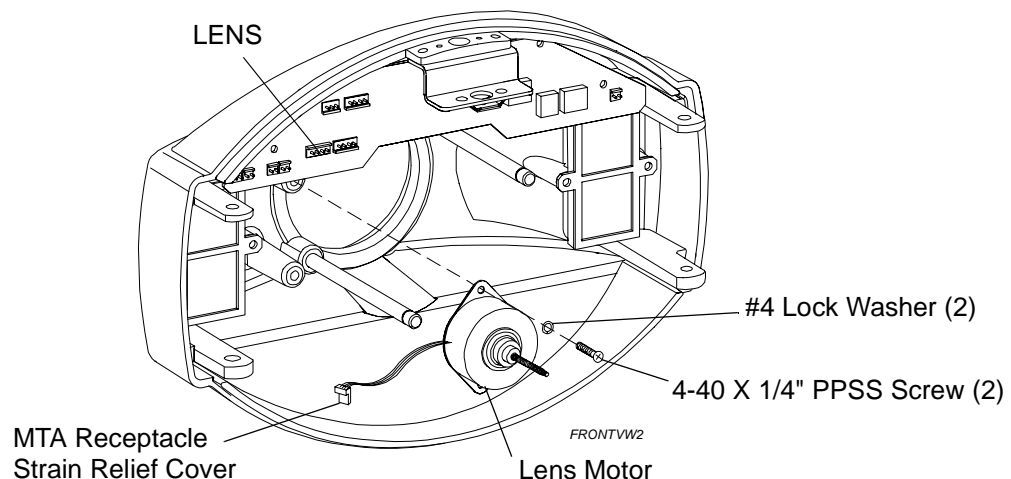


Figure 2-13: VL6 Luminaire Lens Motor Replacement

Step 5. At lens motor, remove two 4-40 X 1/4" PPSS screws and two #4 lock washers securing motor to front assembly, and remove motor.



CAUTION: To avoid poor connections, do not reuse MTA connector from removed motor.

Step 6. Using MTA crimper, crimp motor wires to new 4-pos MTA connector using the following pinouts:

- Pin 1 - Brown
- Pin 2 - Violet
- Pin 3 - Blue
- Pin 4 - White/Orange

Step 7. Install strain relief cover on 4-pos MTA connector.

Step 8. Using permanent ink marker, mark strain relief with "LENS".

Step 9. Install replacement lens motor by performing Steps 2–5 in reverse order.

VL6B/VL6C Luminaire Edge Motor Assembly Replacement

Parts:

21.9660.0039 1 EA ASSY, MOTOR EDGE - VL6B

Tools:

Screwdriver, #1 Phillips
Wrench, 1/4", open-ended
Pliers

To remove and replace VL6B/VL6C luminaire edge motor assembly:

WARNING: All maintenance procedures are to be performed with power removed from the luminaire.

- Step 1. Disconnect luminaire AC input cable from power source.
- Step 2. Remove front assembly. Refer to **“VL6B/VL6C Front Assembly Replacement” on page 31.**
- Step 3. At front assembly, disconnect edge motor MTA receptacle from yoke termination PCB at EDGE J2.
- Step 4. At lens barrel assembly, use pliers to hold standoff on edge motor shaft, and using 1/4" open-ended wrench, remove 4-40 SS KEPS nut from end of motor shaft. **Figure 2-14.**

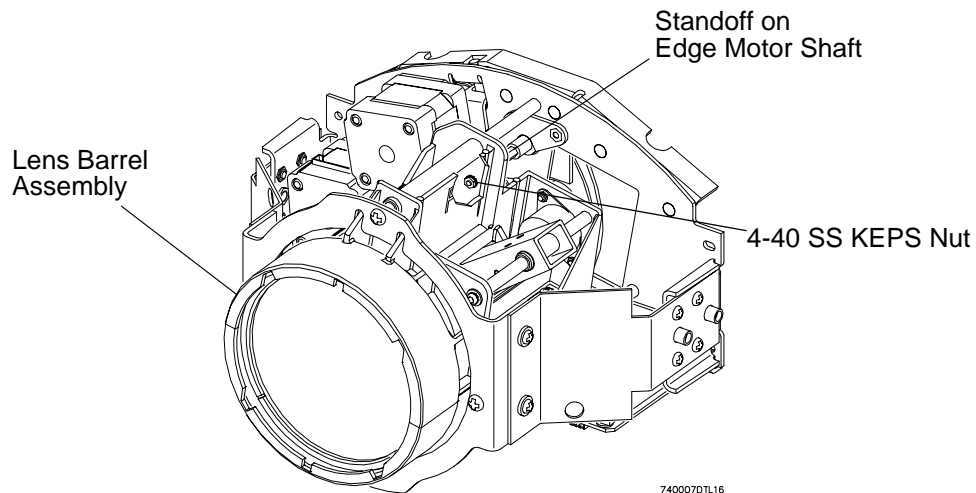


Figure 2-14: Removing Nut From Edge Motor Assembly Shaft

- Step 5. The rotating gobo wheel obscures one of the screws securing the edge motor assembly to the front assembly. At rotating gobo wheel, rotate gobo wheel until the open hole is over head of obscured screw. **Figure 2-15.**

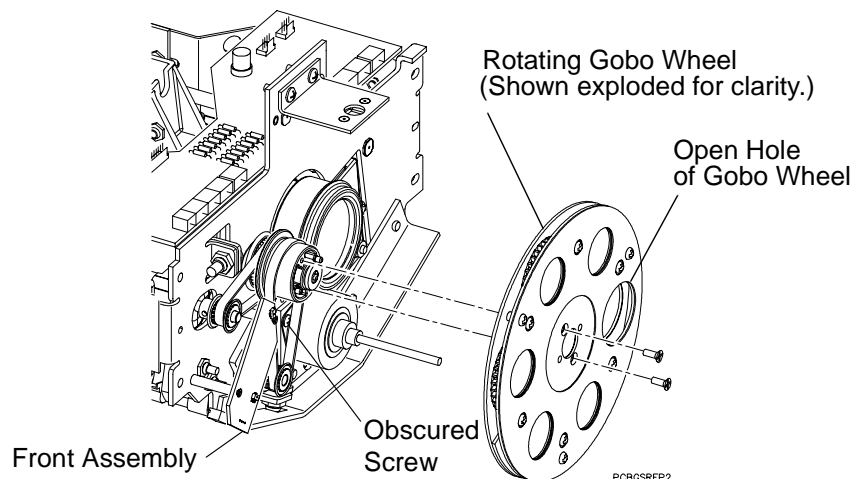


Figure 2-15: Accessing Edge Motor Assembly Attaching Hardware

Note: When removing edge motor support bracket in Step 6, note orientation of bracket for use in re-installation.

- Step 6. At edge motor assembly, using #1 Phillips screwdriver, remove two 4-40 X 3/8" PPZ screws and edge motor support bracket. **Figure 2-16.** and **Figure 2-17.**

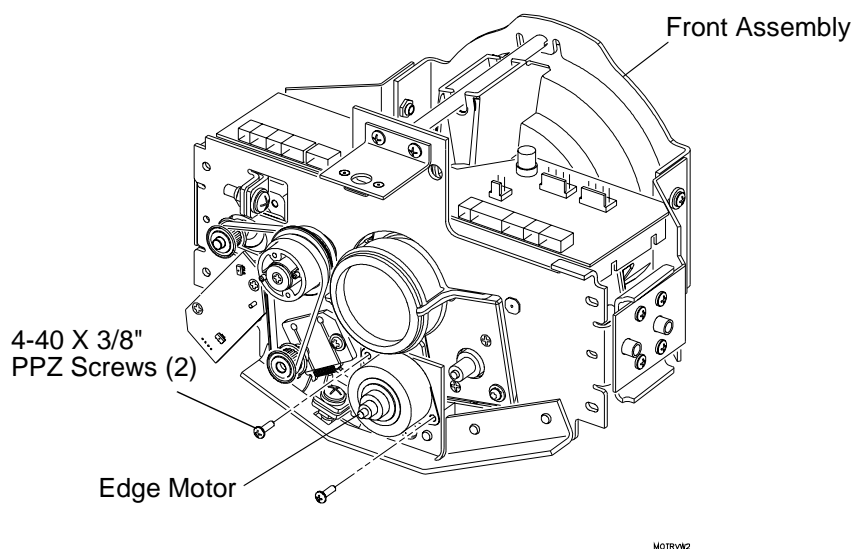


Figure 2-16: Removing Edge Motor Assembly Attaching Hardware

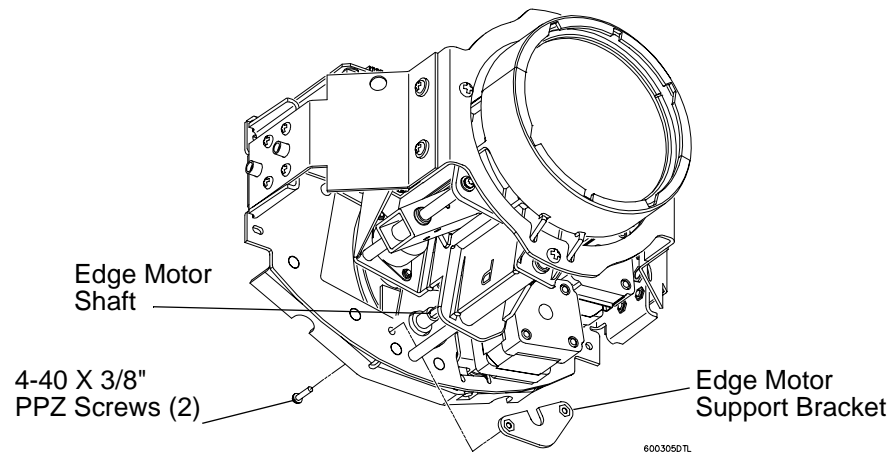


Figure 2-17: Edge Motor Assembly Support Bracket Location

- Step 7. Remove edge motor assembly from front assembly.
- Step 8. Install replacement edge motor assembly by performing Steps 2–7 in reverse order.

VL6 Luminaire Yoke Termination PCB Assembly Replacement

Parts:

24.9638.0070 1 EA PCB ASSY, YOKE TERMINATION, YTB6

Tools:

Screwdriver, #1 Phillips

To remove and replace VL6 luminaire yoke termination PCB:



WARNING: All maintenance procedures are to be performed with power removed from the luminaire.

- Step 1. Disconnect luminaire AC input cable from power source.
- Step 2. Remove color bulkhead assembly. Refer to **“VL6/VL6B/VL6C Color Bulkhead Assembly Replacement” on page 23.**
- Step 3. At front assembly, disconnect remaining MTA receptacles and yoke cable receptacle from yoke termination PCB.
- Step 4. Using #1 Phillips screwdriver, remove four 4-40 X 5/16" PPZ screws and four #4 split lock washers securing yoke termination PCB to front assembly, and remove board. **Figure 2-18.**

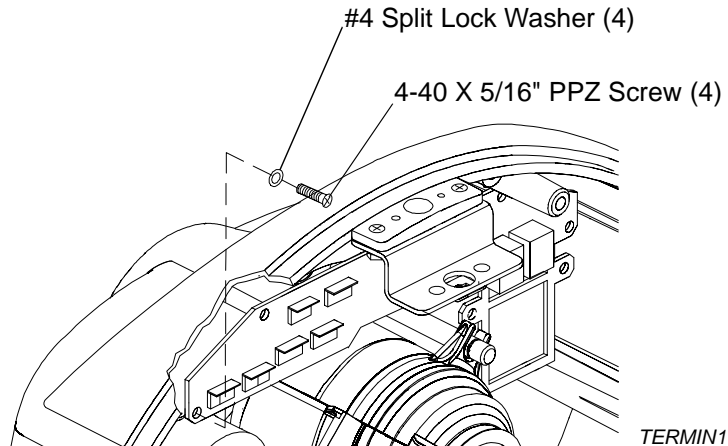


Figure 2-18: VL6 Luminaire Yoke Termination PCB Replacement

- Step 5. Install replacement yoke termination PCB by performing Steps 2–4 in reverse order.

VL6B/VL6C Luminaire Yoke Termination PCB Assembly Replacement

Parts:

24.9660.0515 1 EA PCB ASSY, YOKE TERMINATION- VL6B

Tools:

Screwdriver, #1 Phillips

Screwdriver, #2 Phillips

To remove and replace VL6B/VL6C luminaire yoke termination PCB:

WARNING: All maintenance procedures are to be performed with power removed from the luminaire.

- Step 1. Disconnect luminaire AC input cable from power source.
- Step 2. At head assembly, using #2 Phillips screwdriver, turn two captive screws one-quarter turn and remove cover. (It will remain attached by tether.)
Figure 2-7.
- Step 3. At front cover assembly, using #2 Phillips screwdriver, remove two 10-32 X 1/2" PPB screws (one on each side) and remove front cover assembly.
Figure 2-7.
- Step 4. At front assembly, disconnect all MTA receptacles and yoke cable receptacle from yoke termination PCB.
- Step 5. Using #1 Phillips screwdriver, remove four 4-40 X 3/8" PPZ screws and four #4 lock washers securing yoke termination PCB to front assembly, and remove board. **Figure 2-19.**
- Step 6. Install replacement yoke termination PCB by performing Steps 2–5 in reverse order.

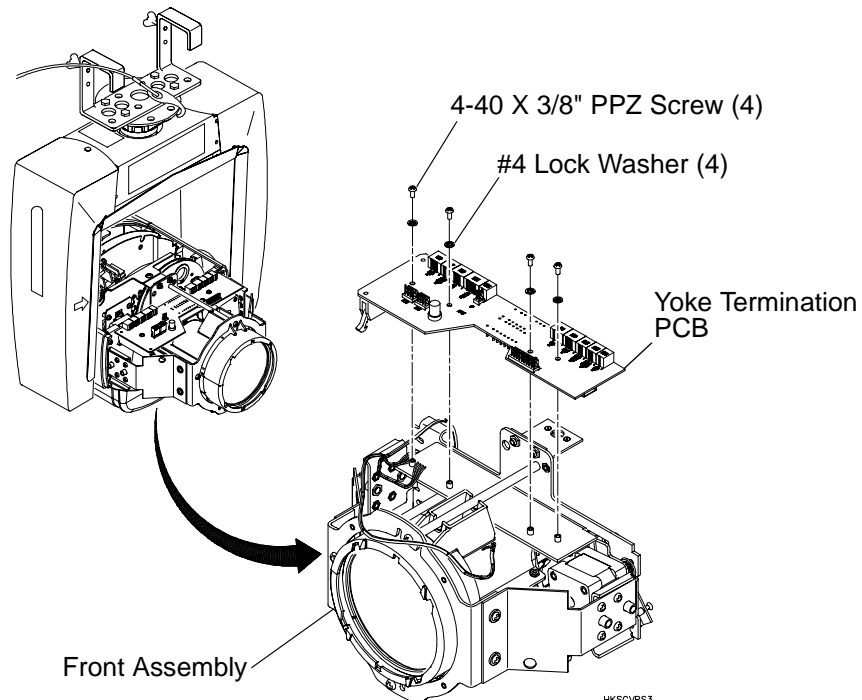


Figure 2-19: VL6B/VL6C Luminaire Yoke Termination PCB Replacement

VL6/VL6B/VL6C Ignitor Board Assembly Replacement

Parts:

23.9638.0136 1 EA ASSY, VL6 IGNITOR BOARD IGN6
23.9660.0520 1 EA ASSY, IGNITOR BOARD/CABLE -VL6B
55.2186.0001 2 EA CABLE TIE, SMALL .10 X 4"

Tools:

Screwdriver, #1 Phillips
Screwdriver, #2 Phillips
Screwdriver, slotted, #1
Diagonal cutters
Nutdriver, 5/16"
Flashlight

To remove and replace ignitor board assembly:

WARNING: All maintenance procedures are to be performed with power removed from the luminaire.

- Step 1. Disconnect luminaire AC input cable from power source.
- Step 2. Remove dimmer bulkhead assembly. Refer to **“VL6/VL6B/VL6C Dimmer Bulkhead Assembly Replacement” on page 27.**
- Step 3. Remove color bulkhead assembly. Refer to **“VL6/VL6B/VL6C Color Bulkhead Assembly Replacement” on page 23.**
- Step 4. Locate tilt-side yoke leg cover and remove. Refer to **“Yoke Components” on page 9.**
- Step 5. At tilt-side yoke leg, using diagonal cutters, remove two cable ties securing lamp wires to cable anchors.
- Step 6. At top of tilt-side yoke leg, disconnect two ignitor board assembly lamp wires that pass through tilt driven pulley.



CAUTION: In VL6 luminaires, screws removed in Step 7 also secure lamp assembly tether and safety ground cable to standoffs. When lamp assembly tether is disconnected, and ignitor board output cable assembly is disconnected in Step 8, lamp assembly can fall out of luminaire. Support lamp assembly.

- Step 7. At ignitor board assembly, using #2 Phillips screwdriver, remove two 6-32 X 1/2" PPZ screws and two #6 lock washers securing ignitor board assembly to standoffs. (Also secures tether and safety ground cable in VL6 luminaires.) **Figure 2-20.**

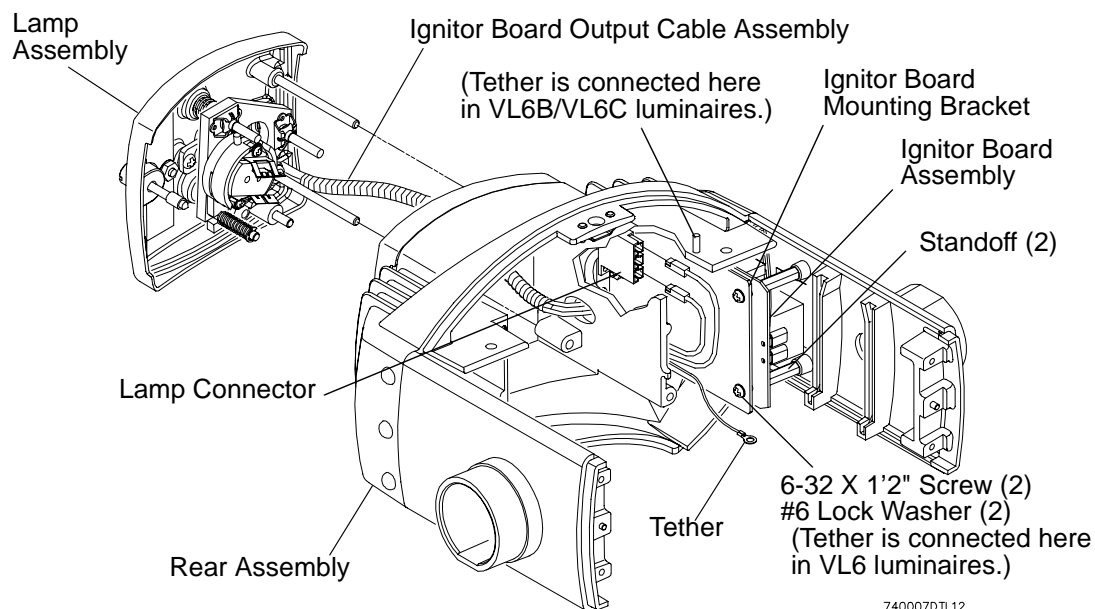


Figure 2-20: Ignitor Board Assembly Replacement

- Step 8. Disconnect ignitor board output cable assembly from lamp connector located on ignitor board mounting bracket.
- Step 9. Carefully remove ignitor board assembly from luminaire.
- Step 10. Replace ignitor board assembly by performing Steps 2–9 in reverse order.

VL6B/VL6C Luminaire Rotating Gobo Wheel Assembly Replacement

Parts:

21.9660.0105 1 EA ASSY, ROTATING GOBO WHEEL - VL6B

Tools:

Screwdriver, #1 Phillips

To remove and replace VL6B/VL6C luminaire rotating gobo wheel assembly:

WARNING: All maintenance procedures are to be performed with power removed from the luminaire.

- Step 1. Disconnect luminaire AC input cable from power source.
- Step 2. Remove dimmer bulkhead assembly. Refer to [“VL6/VL6B/VL6C Dimmer Bulkhead Assembly Replacement” on page 27.](#)
- Step 3. Remove color bulkhead assembly. Refer to [“VL6/VL6B/VL6C Color Bulkhead Assembly Replacement” on page 23.](#)
- Step 4. At rotating gobo wheel assembly, using #1 Phillips screwdriver, remove two 4-40 X 1/4" PFZ screws (do not remove center screw) and remove rotating gobo wheel assembly from front assembly.

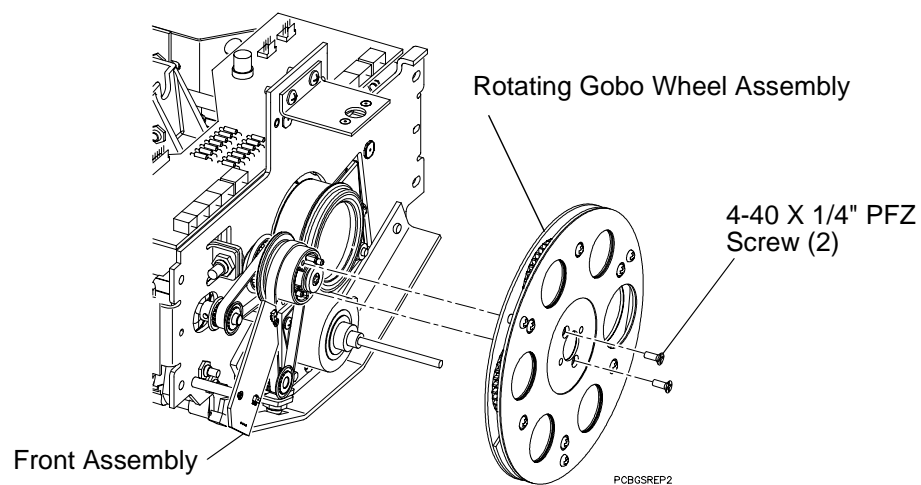


Figure 2-21: VL6B/VL6C Rotating Gobo Wheel Assembly Replacement

- Step 5. Install replacement rotating gobo wheel assembly by performing steps Steps 2–4 in reverse order.

Yoke Assembly

This section provides removal and replacement procedures for components found in the luminaire yoke assembly.

VL6/VL6B/VL6C Tilt Mechanism Assembly Replacement

Parts:

22.9638.0059	1 EA	ASSY, PAN/TILT MECHANISM, VL6 (VL6 ONLY)
22.9638.0059-01	1 EA	ASSY, PAN/TILT MECHANISM, VL6 J06 ENCODER (VL6B/VL6C ONLY)
55.2186.0001	2 EA	CABLE TIE, SMALL .10X4"

Tools:

Screwdriver, #2 Phillips
Nutdriver, 5/16"
Diagonal cutters
Wrench, Allen, 5/32"
Loctite 242 removable-blue (06.6008.001)

To remove and replace tilt mechanism assembly:



WARNING: All maintenance procedures are to be performed with power removed from the luminaire.

- Step 1. Disconnect luminaire AC input cable from power source.
- Step 2. Remove tilt-side yoke leg cover.
- Step 3. Using diagonal cutter, at side of tilt-side yoke leg, remove two cable ties securing lamp wires to cable anchors. **Figure 2-22.**
- Step 4. At terminal strip, disconnect lamp wire.
- Step 5. At ground stud, using 5/16" nutdriver, remove 6-32 KEPS nut securing terminal rings and remove terminal rings.
- Step 6. At top of yoke, using 5/32" Allen wrench, insert wrench through hole in top of yoke cross member and into head of 10-32 X 1" SCSS belt tension and adjustment screw, and remove screw and #10 flat washer.
- Step 7. Remove belt from pulley.
- Step 8. At tilt mechanism assembly, disconnect 5-pin MTA connector from encoder, and 2-pin MTA connector from motor. Cut cable ties securing wires to mechanism.

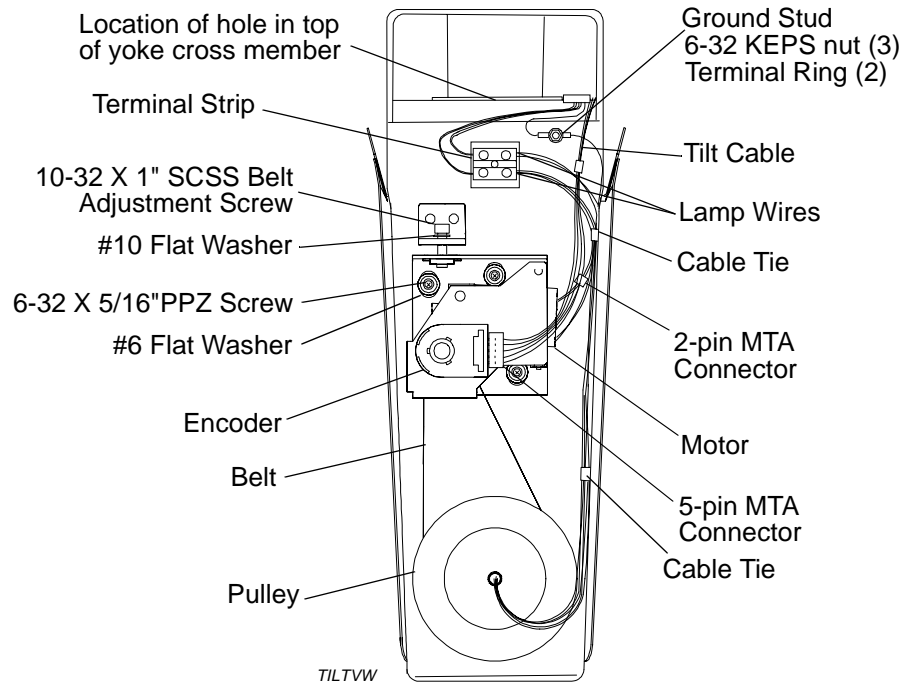


Figure 2-22: Tilt Mechanism Assembly Replacement

- Step 1. At tilt mechanism assembly, using #1 Phillips screwdriver, remove three 6-32 X 5/16" PPZ screws and three #6 flat washers securing mechanism to yoke, and remove mechanism.
- Step 2. Replace tilt mechanism assembly by performing Steps 6–9 in reverse order. Apply Loctite 242 to three 6-32 X 5/16" screws removed in step 9 before re-installing.
- Step 3. Adjust belt tension. Refer to [“VL6/VL6B/VL6C Pan/Tilt Belt Tension Adjustment” on page 56.](#)
- Step 4. Re-assemble luminaire by performing Steps 2–5 in reverse order.

VL6/VL6B/VL6C Pan Mechanism Assembly Replacement

Parts::

22.9638.0059	1 EA	ASSY, PAN/TILT MECHANISM, VL6 (VL6 ONLY)
22.9638.0059-01	1 EA	ASSY, PAN/TILT MECHANISM, VL6 J06 ENCODER (VL6B/VL6C ONLY)
55.2186.0001	2 EA	CABLE TIE, SMALL .10X4"

Tools:

Screwdriver, #2 Phillips
Screwdriver, #1 slotted
Nutdriver, 5/16"
Diagonal cutters
T-wrench, long handled

To remove and replace pan mechanism assembly:



WARNING: All maintenance procedures are to be performed with power removed from the luminaire.

- Step 1. Disconnect luminaire AC input cable from power source.
- Step 2. Remove both yoke leg covers.
- Step 3. At yoke top cross member, using #2 Phillips screwdriver, remove four 6-32 X 5/16" PPZ screws and four #6 lock washers securing heatshield to cross member, and remove heatshield. **Figure 2-23.**

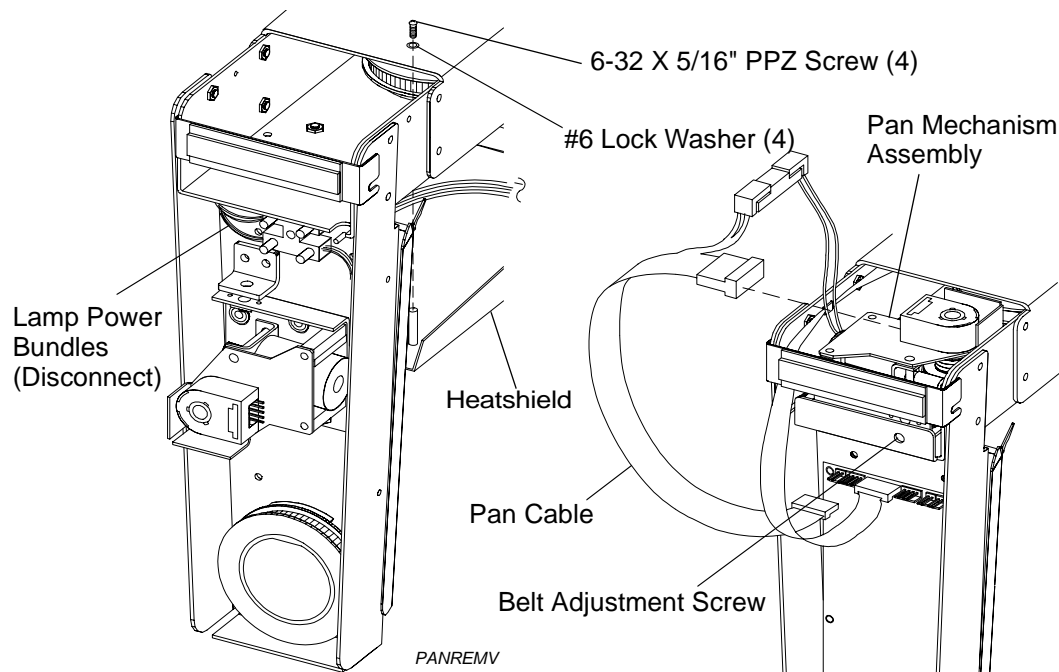


Figure 2-23: Disconnecting Pan Mechanism Assembly Wires

- Step 4. Disconnect input cable wiring.
 - a. At tilt-side yoke leg, at terminal strip, disconnect lamp power bundles (from input cable side).
 - b. Slide wires back through yoke leg.
 - c. At ground stud, using 5/16" nutdriver, remove two 6-32 Keps nuts that secure ground cable ring terminals and remove ring terminals.
 - d. Slide input cable ground wire back through yoke leg.
- Step 5. At lamp control board (LCB), disconnect two 2-pin MTA connectors at POWER P11A/, and one 4-pin MTA connector at COMM P10.
- Step 6. Slide wires back through yoke leg.
- Step 7. Push all input cable wires up into pan tube.
- Step 8. At pan mechanism assembly, disconnect 5-pin MTA connector from encoder, and 2-pin MTA connector from motor. Cut cable ties securing wires to mechanism.
- Step 9. At top of board-side yoke leg, using long handled T-wrench, insert wrench through hole in side of yoke cross member and into head of 10-32 X 1" SCSS belt tension and adjustment screw, and remove screw and #10 flat washer.
- Step 10. Using #2 Phillips screwdriver, remove three 6-32 X 5/16" PPZ screws and three #6 flat washers securing pan mechanism assembly to yoke and push mechanism toward pan tube.

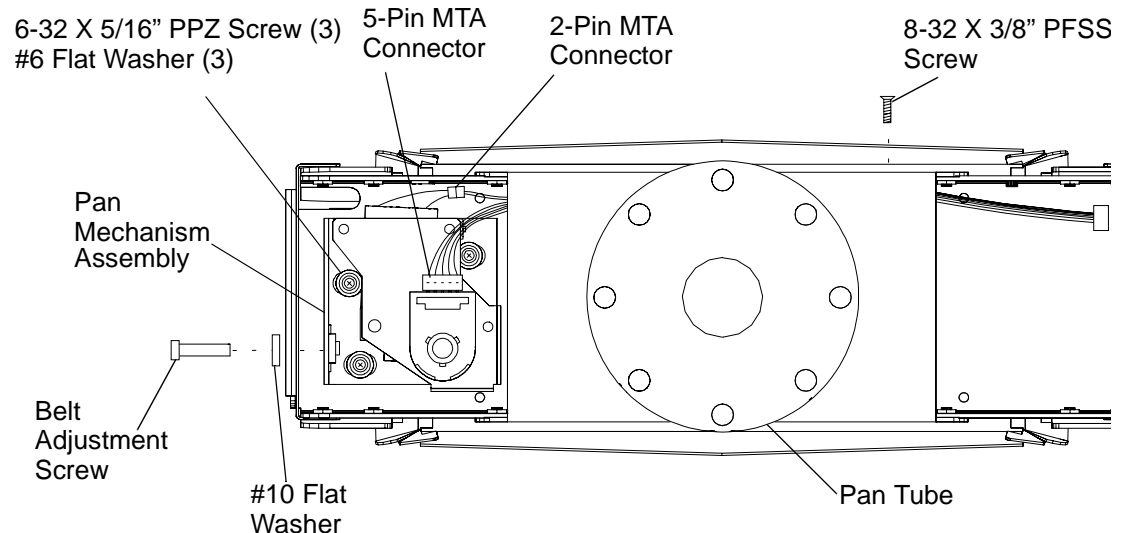


Figure 2-24: Disconnecting Pan Mechanism Assembly

- Step 11. At cross member, using #2 Phillips screwdriver, remove twelve 8-32 X 3/8" PFSS screws securing top cross member to bottom cross member. [Figure 2-25](#).

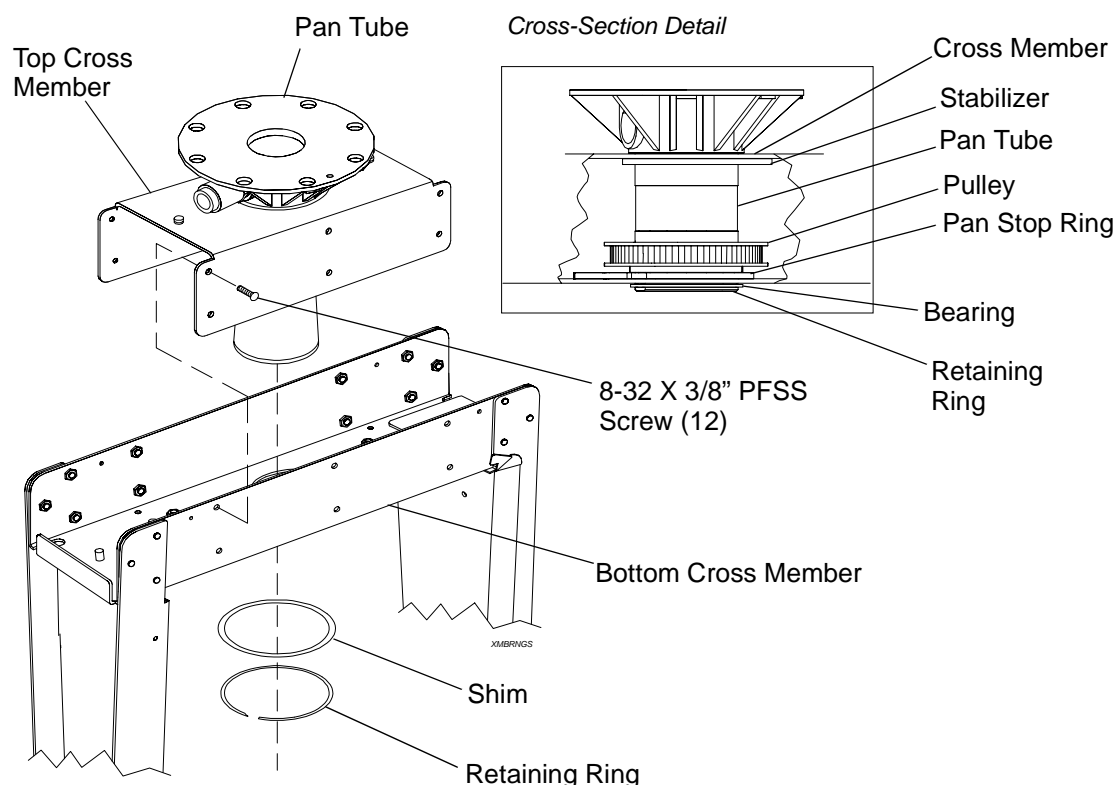


Figure 2-25: Removing Top Cross Member and Pan Tube

- Step 12. At bottom of pan tube, using slotted screwdriver, remove retaining ring and shim.
- Step 13. Pull up on top cross member and pan tube and remove belt from pulley.
- Step 14. Remove pan mechanism.
- Step 15. Position replacement pan mechanism in yoke cross member.
- Step 16. Apply Loctite 242 to three 6-32 X 5/16" PPZ screws removed in step 9.
- Step 17. Re-install three 6-32 X 5/16" PPZ screws and three #6 flat washers, and using #2 Phillips screwdriver tighten to secure pan mechanism assembly to yoke.
- Step 18. Re-install belt on pulley.
- Step 19. Re-install top cross member and pan tube luminaire, ensuring pan stop points towards pan mechanism.
- Step 20. Place shim on pan tube and secure pan tube in place with retaining ring.
- Step 21. Re-install twelve 8-32 X 3/8" PPSS screws, and using #2 Phillips screwdriver, tighten to secure top cross member to bottom cross member.

- Step 22. Using long handled T-wrench, re-install 10-32 X 1" SCSS belt adjustment screw and #10 flat washer.
- Step 23. Perform belt tension adjustment. Refer to **“VL6/VL6B/VL6C Pan/Tilt Belt Tension Adjustment” on page 56.**
- Step 24. Re-assemble remaining components by performing Steps 2–8 in reverse order.

VL6/VL6B/VL6C Pan/Tilt Belt Tension Adjustment

Tools:

- Wrench, Allen, 5/32", long handled
- T-wrench, long handled

Loose pan/tilt drive belts can create calibration problems. When the luminaire reaches the end of travel, excess belt slack can produce a vibration causing the encoder to continue producing a movement output signal to the processor (even though the luminaire is at its stop).

To fix this problem, slowly increase the belt tension until the vibration is dampened.



CAUTION: Do not overtighten belt, pulley will break.

To adjust either the pan mechanism or tilt mechanism pulley belt:

- Step 1. Pan or tilt luminaire head back and forth, noting the tension created on one side of belt and deflections on the other. **Figure 2-26.**

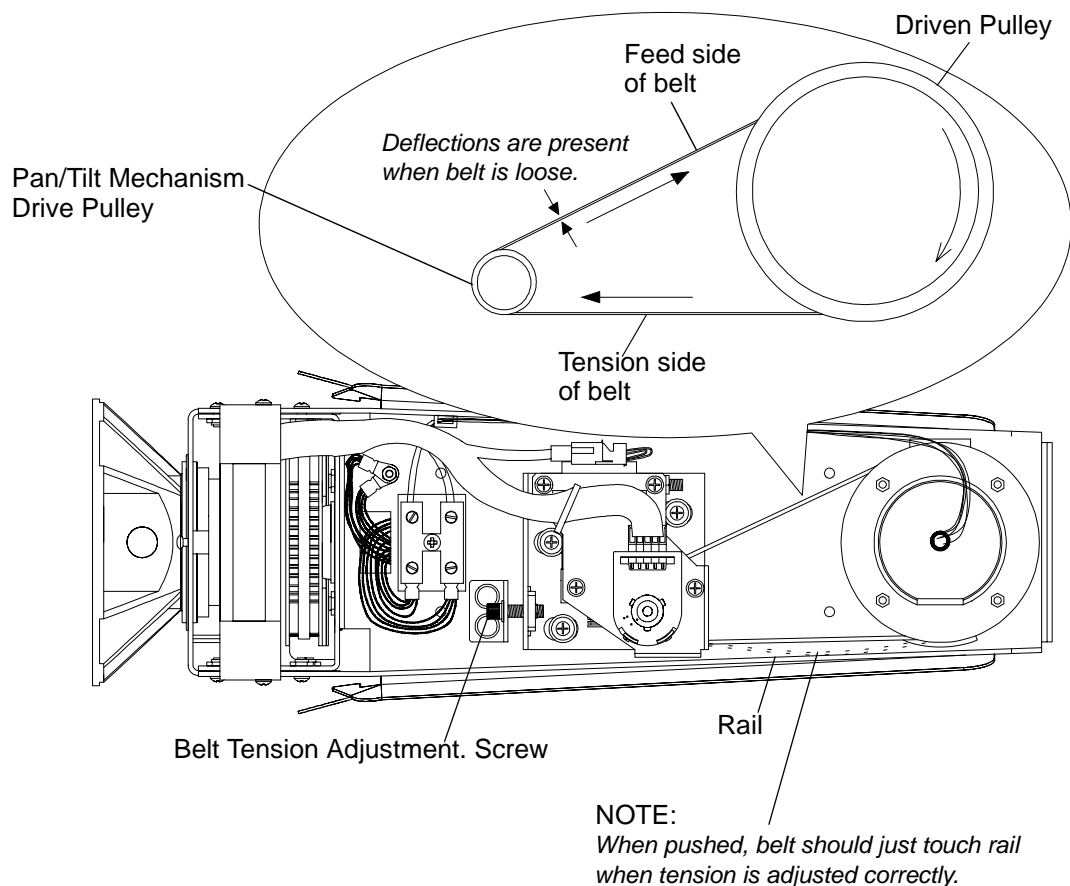


Figure 2-26: Belt Tension Adjustment

Note: Bilateral deflection may be observed by loosening the tension adjustment screw and rotating the head assembly. As the head is rotated back and forth, the tension is created on one side and deflections are created on the other.

- Step 2. Using 5/32" Allen wrench, tighten belt tension adjustment screw until no bilateral deflection occurs. For tilt mechanism, use long handled T-wrench going through hole in top of yoke cross member.
- Step 3. Using finger, test belt tension. With proper tension, you should be able to push the belt flat so that it just touches side rail.

VL6/VL6B/VL6C LCB PCB Assembly Replacement

Parts:

24.9638.0009.01 1 EA PCB ASSY, VL6 LAMP CONTROL BD W/EPROM

Tools:

None

To remove and replace LCB PCB assembly:



WARNING: All maintenance procedures are to be performed with power removed from the luminaire.

Step 1. Disconnect luminaire AC input cable from power source.

Step 2. Remove board-side yoke leg cover.



CAUTION: Always use anti-static precautions when working with PCBs.

Step 3. At LCB, disconnect all cables. [Figure 2-27](#).

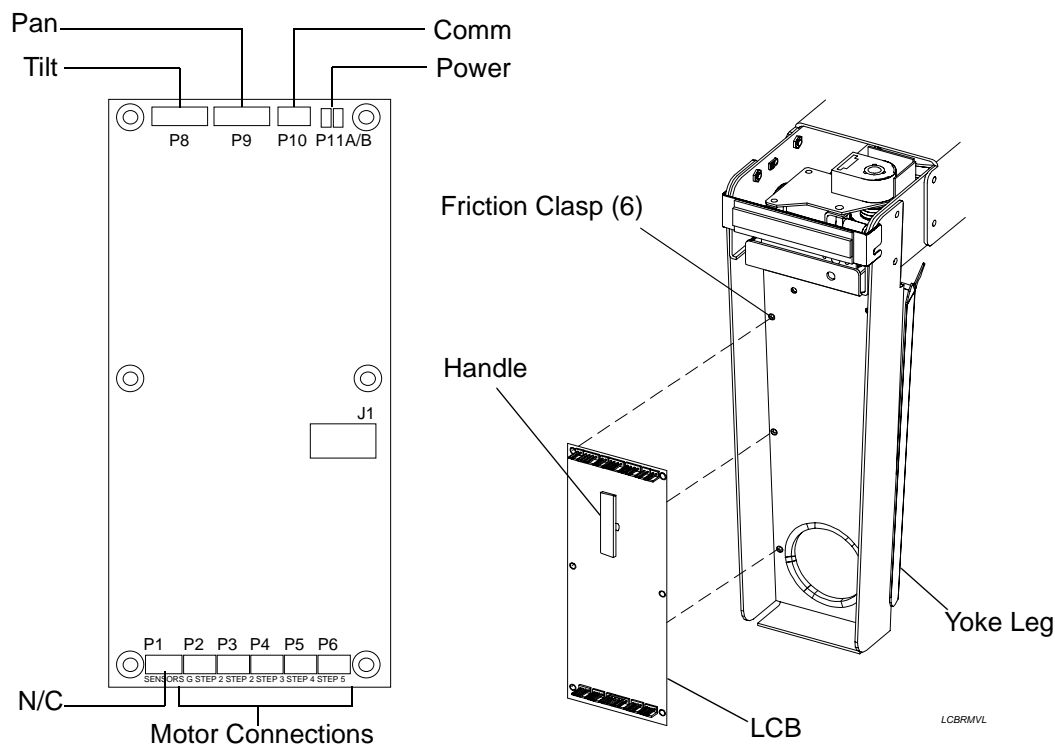


Figure 2-27: LCB PCB Replacement

Step 4. At LCB, firmly grasp handle and pull LCB out from yoke leg, disengaging board from six friction clasps.

Step 5. Replace LCB by performing Steps 2–4 in reverse order.

VL6B/VL6C Luminaire Controller PCB Assembly Replacement

Parts:

24.9660.0500 1 EA PCB ASSY, VL6B CONTROLLER

Tools:

Wrench, 7/16", open-ended

To remove and replace VL6B/VL6C luminaire controller PCB assembly:



WARNING: All maintenance procedures are to be performed with power removed from the luminaire.

Step 1. Disconnect luminaire AC input cable from power source.

Step 2. Remove tilt-side yoke leg cover.



CAUTION: Always use anti-static precautions when working with PCBs.

Step 3. At PCB, disconnect all cables. **Figure 2-28.**

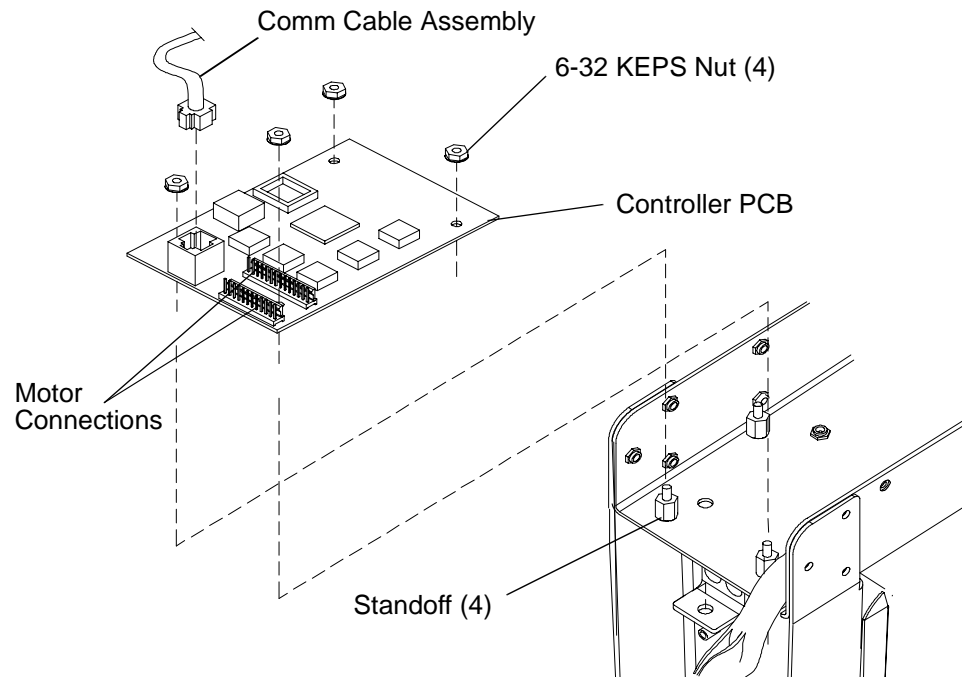


Figure 2-28: VL6B/VL6C Luminaire Controller PCB Assembly Replacement

Step 4. At PCB, using 7/16" open-ended wrench, remove four 6-32 KEPS nuts securing PCB to standoffs, and remove PCB from yoke.

Step 5. Install replacement VL6/VL6B/VL6C controller PCB assembly by performing Steps 2–4 in reverse order.

VL6B/VL6C Luminaire Relay Assembly Replacement

Parts:

23.9650.3327 1EA ELEC ASSY, RELAY

Tools:

Screwdriver, #2 Phillips

To remove and replace VL6B/VL6C luminaire controller PCB assembly:



WARNING: All maintenance procedures are to be performed with power removed from the luminaire.

- Step 1. Disconnect luminaire AC input cable from power source.
- Step 2. Remove tilt-side yoke leg cover.
- Step 3. At relay assembly, disconnect all wires. [Figure 2-29](#).

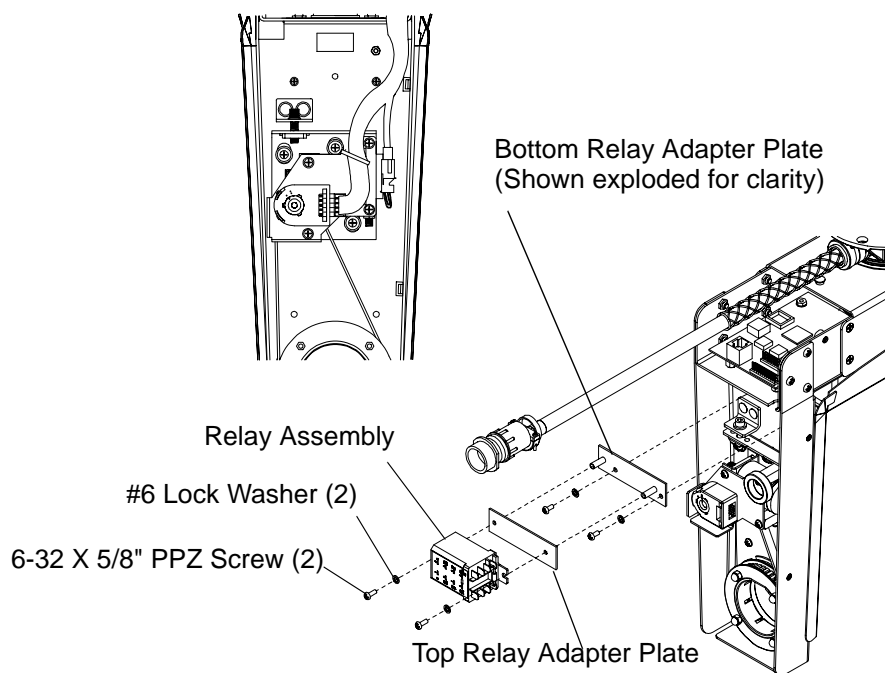


Figure 2-29: VL6B/VL6C Relay Replacement

- Step 4. At relay assembly, using #2 Phillips screwdriver, remove two 6-32 X 5/8" PPZ screws and two #6 lock washers securing relay assembly and top relay adapter plate to bottom relay adapter plate, and remove relay assembly and top adapter plate. Retain top relay adapter plate for reuse when installing replacement relay assembly.
- Step 5. Install replacement relay assembly by performing Steps 2–4 in reverse order.

Servicing

Cleaning

VL6 NFOV Lens Assembly Dust Prevention and Lens Cleaning

The NFOV lens assembly in the VL6 luminaire is comprised of two lens barrel halves. The seam between the two halves may have a gap through which dust can enter eventually creating a less than perfect optical system. To prevent dust entering the lens assembly, separate the lens halves and apply a small bead of translucent RTV 108 along the seam and press the two lens halves together. All dust should be cleaned from inside the lens assembly.

Tools:

- Screwdriver, # 2 Phillips
- Nut driver, 1/4"
- Versilube (06.6027.0001)
- RTV, Translucent 108 (06.6007.0001)
- Gloves, cotton
- Clean, white, lint-free cloth
- 99% Isopropyl alcohol (commercial grade)

To perform VL6 NFOV lens assembly dust prevention modification and cleaning:

WARNING: All maintenance procedures are to be performed with power removed from the luminaire.

Step 1. Disconnect luminaire AC input cable from power source.

Step 2. Remove NFOV lens assembly. Refer to **“VL6 Lens Assembly Replacement” on page 33**.

Note: The reflective heat shield sticker on the small end of the lens assembly is no longer needed.

Step 3. At small end of lens assembly, remove heat shield sticker.

Step 4. Place lens assembly on workbench.

Note: Some luminaires may have two #4 .250OD X 0.125ID X 0.015THK flat washers installed between lens halves at small end of lens assembly. These washers are no longer required. If installed, discard.

Step 5. At lens assembly, using #2 Phillips screwdriver and 1/4" nut driver, remove four 4-40 X 7/16" PPZ screws, four 4-40 HEX nuts, and eight #4 flat washers. [Figure 2-30.](#)

Step 6. Carefully remove one half of the two lens barrel sections.



CAUTION: Always wear cotton gloves or finger cots when working with lenses.

Step 7. Using cotton gloves, remove each of four lenses. Note location and direction of lenses.

Step 8. Using a clean, white, lint-free cloth, remove any debris inside the lens barrel halves and mating edges.

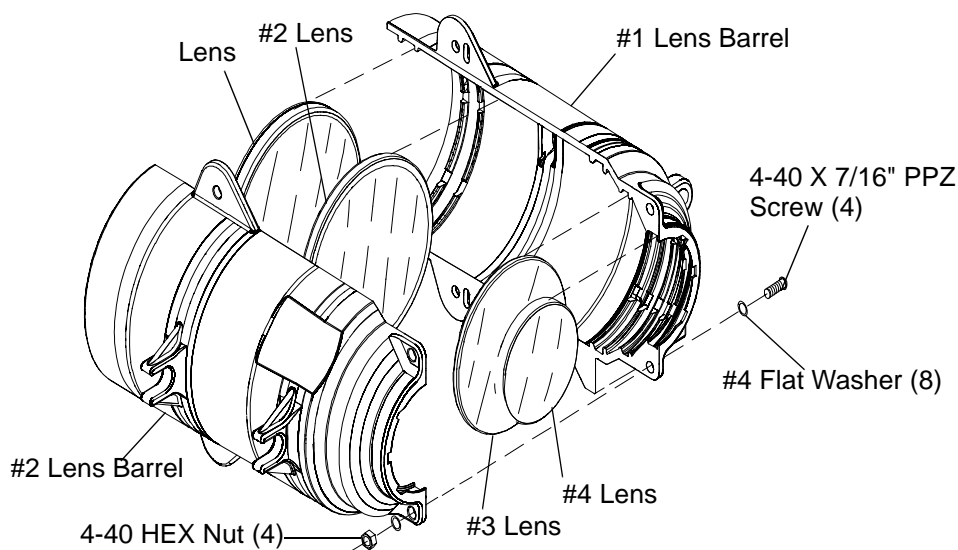


Figure 2-30: VL6 Luminaire NFOV Lens Assembly Dust Prevention Modification and Cleaning

Step 9. Using a second clean, white, lint-free cloth and isopropyl alcohol, clean each of the four lenses thoroughly.

Step 10. At one lens barrel half, apply a thin bead of translucent RTV 108 along both mating edges.

Step 11. At other lens barrel half, install lenses.

Step 12. Carefully place lens barrel halves together.

Step 13. Re-install four 4-40 X 7/16" PPZ screws, eight #4 flat washers, and four 4-40 HEX nuts in lens assembly, and using #2 Phillips screwdriver and 1/4" nut driver, tighten to secure lens barrel assembly together.

Step 14. Re-install lens assembly. Refer to [“VL6 Lens Assembly Replacement” on page 33.](#)

VL6B/VL6C Lens Barrel Assembly Dust Protection and Lens Cleaning

The lens barrel assembly in the VL6B/VL6C luminaire is comprised of two lens barrel halves. The seam between the two halves may have a gap through which dust can enter eventually creating a less than perfect optical system. To prevent dust entering the lens barrel assembly, separate the lens halves and apply a small bead of translucent RTV 108 along the seam and press the two lens halves together. All dust should be cleaned from inside the lens assembly.

Tools:

- Screwdriver, # 2 Phillips
- Nut driver, 1/4"
- Versilube (06.6027.0001)
- RTV, Translucent 108 (06.6007.0001)
- Gloves, cotton
- Clean, white, lint-free cloth
- 99% Isopropyl alcohol (commercial grade)
- Loctite 425, surface curing-purple (06.6008.0003)

To perform VL6B/VL6C lens barrel assembly dust prevention modification and cleaning:



WARNING: All maintenance procedures are to be performed with power removed from the luminaire.

- Step 1. Disconnect luminaire AC input cable from power source.
- Step 2. Remove lens barrel assembly. Refer to **“VL6B/VL6C Lens Barrel Assembly Replacement” on page 37.**
- Step 3. Place lens barrel assembly on workbench.
- Step 4. At lens barrel assembly, using #2 Phillips screwdriver and 1/4" nut driver, remove four 4-40 X 3/8" PPSS screws, four #4 flat washers, and four 4-40 KEPS nuts. **Figure 2-31.**
- Step 5. Carefully remove one half of the two lens barrel sections.



CAUTION: Always wear cotton gloves or finger cots when working with lenses.

- Step 6. Using cotton gloves, remove group 1 and group 3 sub-barrel assemblies, and lens 9. Note location and direction of lens assemblies and lens 9.
- Step 7. Using a clean, white, lint-free cloth, remove any debris inside the lens barrel halves and mating edges.
- Step 8. Using a second clean, white, lint-free cloth and isopropyl alcohol, clean the outside lenses of both sub-barrel assemblies and lens 9 thoroughly.

- Step 9. At one lens barrel half, apply a thin bead of translucent RTV 108 along both mating edges.

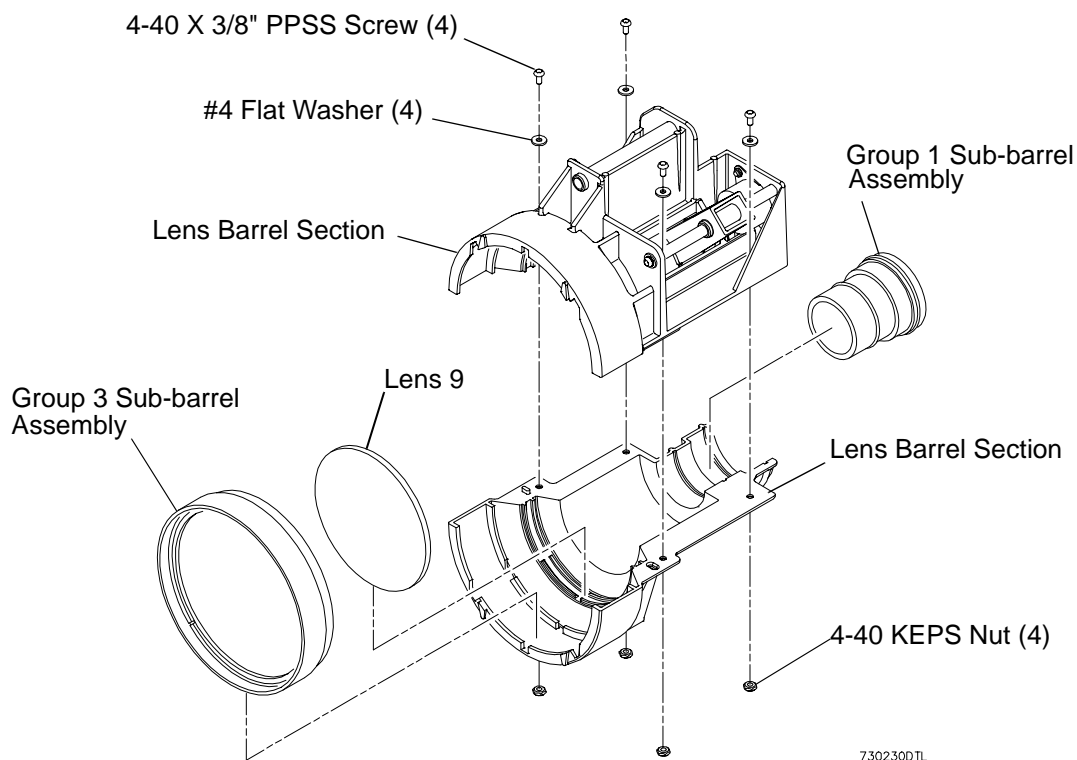


Figure 2-31: VL6B/VL6C Luminaire Lens Barrel Assembly Dust Prevention Modification and Cleaning

- Step 10. At other lens barrel half, re-install group 1 and group 3 sub-barrel assemblies, and lens 9.
- Step 11. Carefully place lens barrel halves together.
- Step 12. Apply Loctite 425 to four 4-40 X 3/8" screws removed in Step 3.
- Step 13. Re-install four 4-40 X 3/8" PPSS screws, four #4 flat washers, and four 4-40 KEPS nuts in lens barrel assembly, and using #2 Phillips screwdriver and 1/4" nut driver, tighten to secure lens barrel assembly together.
- Step 14. Re-install lens assembly. Refer to [“VL6B/VL6C Lens Barrel Assembly Replacement” on page 37](#).

Front Lenses Cleaning

Tools:

99% Isopropyl alcohol (commercial grade)
Clean, white, lint-free cloth
Cotton gloves

To clean lenses:

WARNING: All maintenance procedures are to be performed with power removed from the luminaire.

Step 1. Disconnect AC input cable from power source.



CAUTION: Use caution when handling lens. Avoid touching or scratching optical surfaces.

Step 2. Apply a small amount of isopropyl alcohol to a clean, white, lint-free cloth.

Step 3. Clean lens by gently wiping with cloth.

Step 4. Repeat Step 3 several times using a new clean cloth each time.

Cleaning the Luminaire

Tools:

Window cleaner (commercial grade)
Clean, white, lint-free cloth
Vacuum cleaner with brush nozzle

To clean the outside of the luminaire:

WARNING: All maintenance procedures are to be performed with power removed from the luminaire.

Step 1. Disconnect AC input cable from power source.

Step 2. Apply window cleaner sparingly to clean, white, lint-free cloth.

Step 3. Wipe outside surface of luminaire with cloth.

To clean the inside of the luminaire:



WARNING: All maintenance procedures are to be performed with power removed from the luminaire.

- Step 1. Disconnect AC input cable from power source.
- Step 2. Face head nose upward.
- Step 3. At head assembly, using #2 Phillips screwdriver, turn two captive screws one-quarter turn and remove removable cover. (It will remain attached by tether.). **Figure 2-32.**

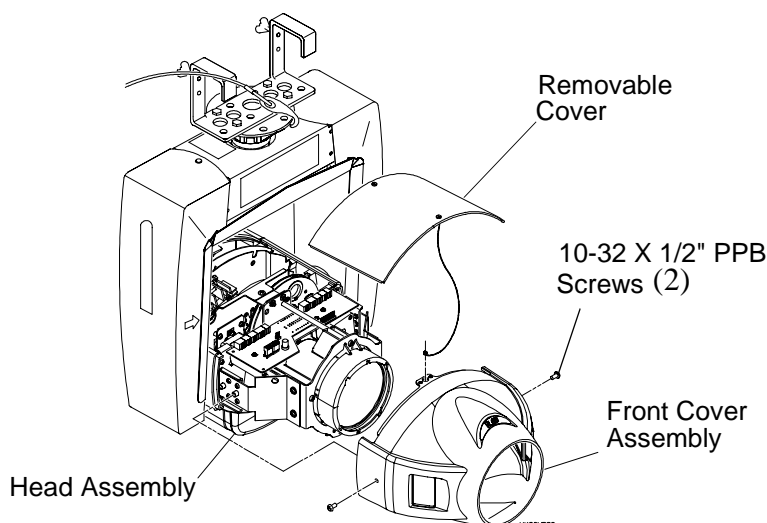


Figure 2-32: Removing Covers

- Step 4. For VL6B/VL6C luminaires, at front cover assembly, using #2 Phillips screwdriver, remove two 10-32 X 1/2" PPB screws, and remove front cover assembly.
- Step 5. Using vacuum brush nozzle, and being especially careful of PCB components, vacuum inside of luminaire head.
- Step 6. Replace covers.

CHAPTER 3.

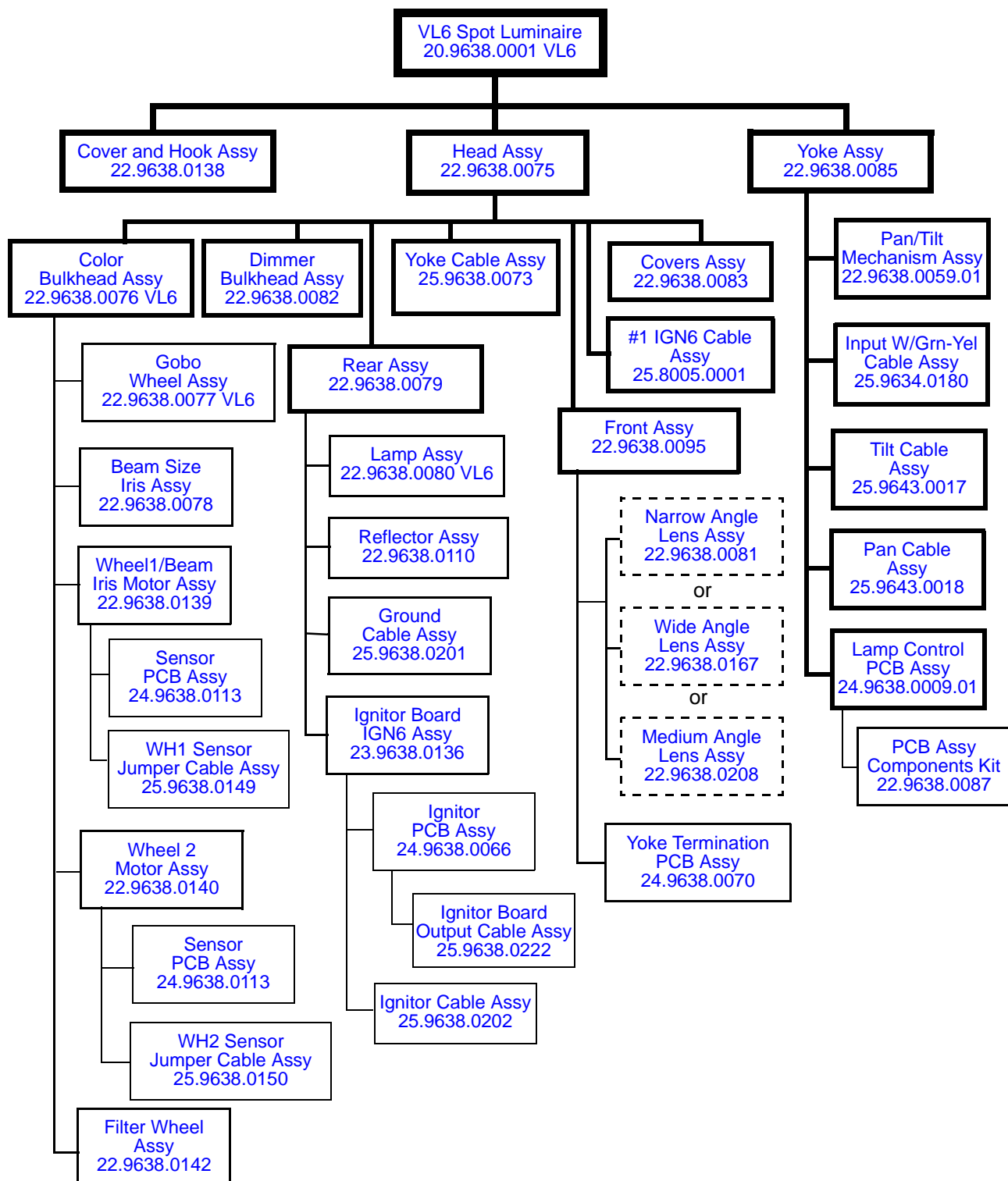
Illustrated Parts Breakdown

This chapter contains illustrated parts breakdowns for assemblies in the VL6 series spot luminaires.

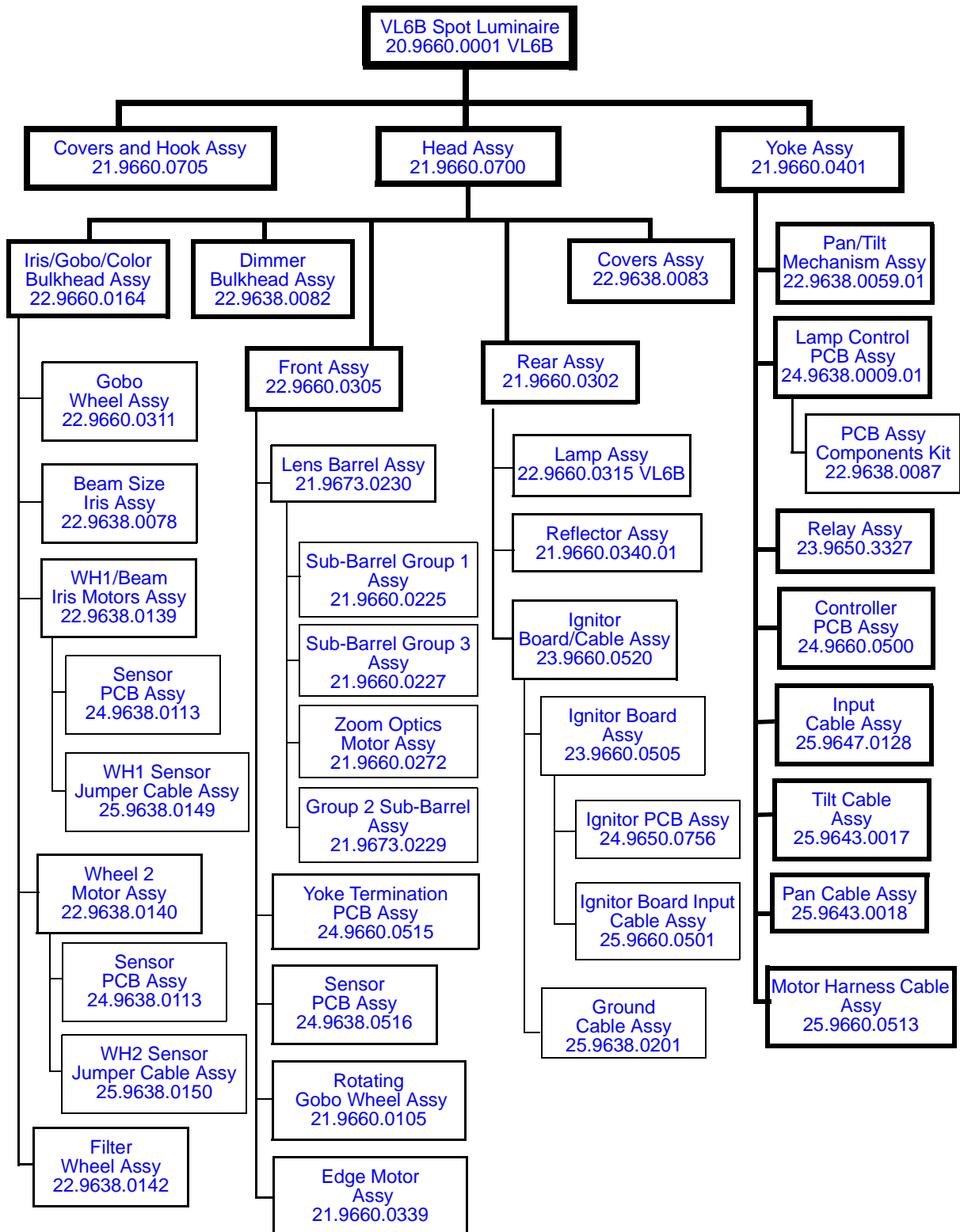
- **Drawing Trees**
- **Top Assembly**
- **Covers and Hooks**
- **Head**
- **Yoke**
- **Cables**

Drawing Trees

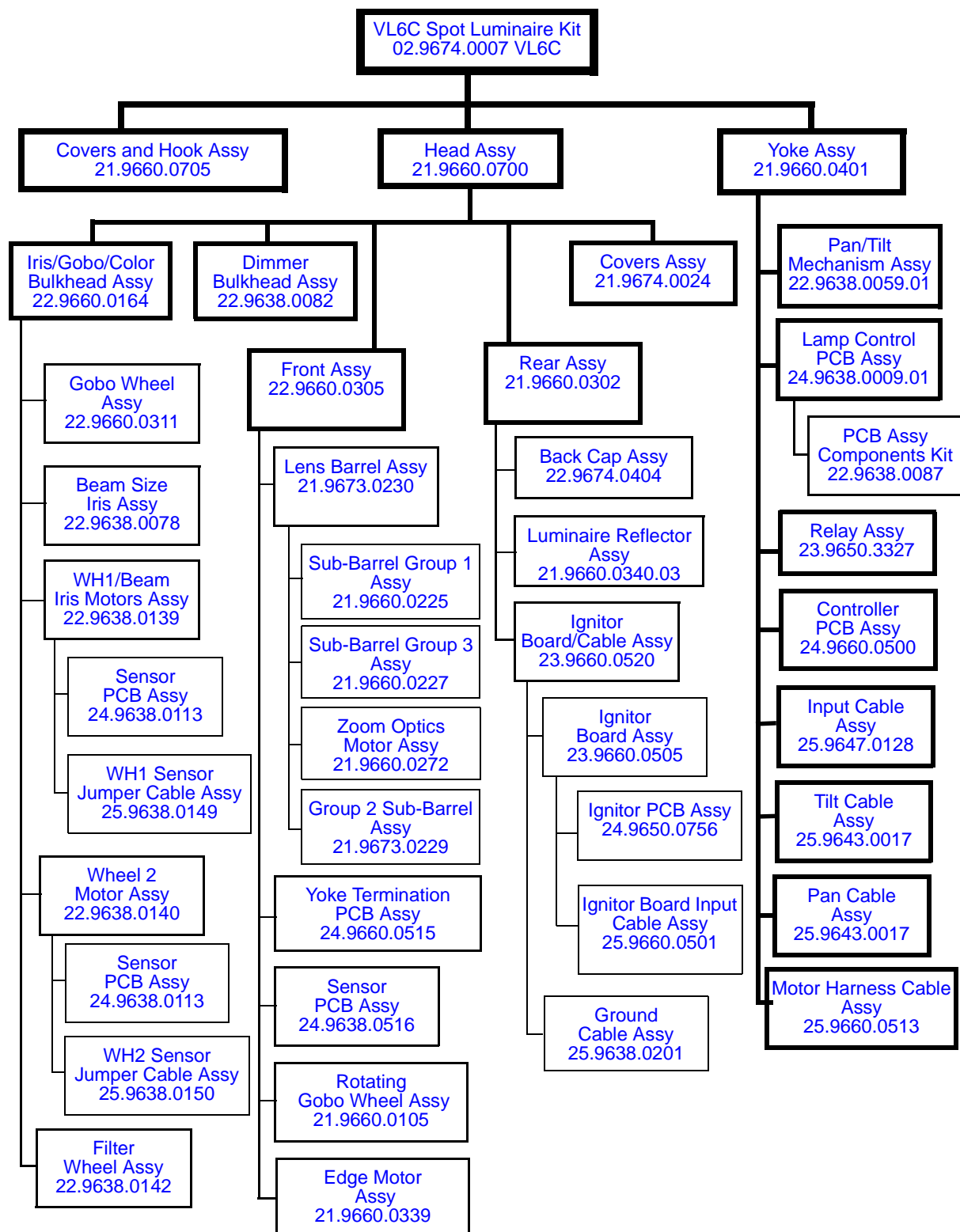
VL6 Spot Luminaire (20.9638.0001)



VL6B Spot Luminaire (20.9660.0001)



VL6C Spot Luminaire (21.9674.0007)



Top Assembly

VL6 Series Spot Luminaire

20.9638.0001 VL6

20.9660.0001 VL6B

02.9674.0007 VL6C

Refer to [Figure 3-1](#).

No.	Item	Qty	UM	Description
1	21.9660.0401	1	EA	ASSY, YOKE VL6B (VL6B/VL6C ONLY)
2	21.9660.0700	1	EA	ASSY, HEAD VL6B (VL6B/VL6C ONLY)
3	21.9660.0705	1	EA	ASSY, COVERS AND HOOK VL6B (VL6B/VL6C ONLY)
4	22.9638.0075	1	EA	HEAD ASSY, VL6 (VL6 ONLY)
5	22.9638.0085	1	EA	YOKE ASSY, VL6 (VL6 ONLY)
6	22.9638.0138	1	EA	ASSY, VL6 COVER AND HOOK (VL6 ONLY)

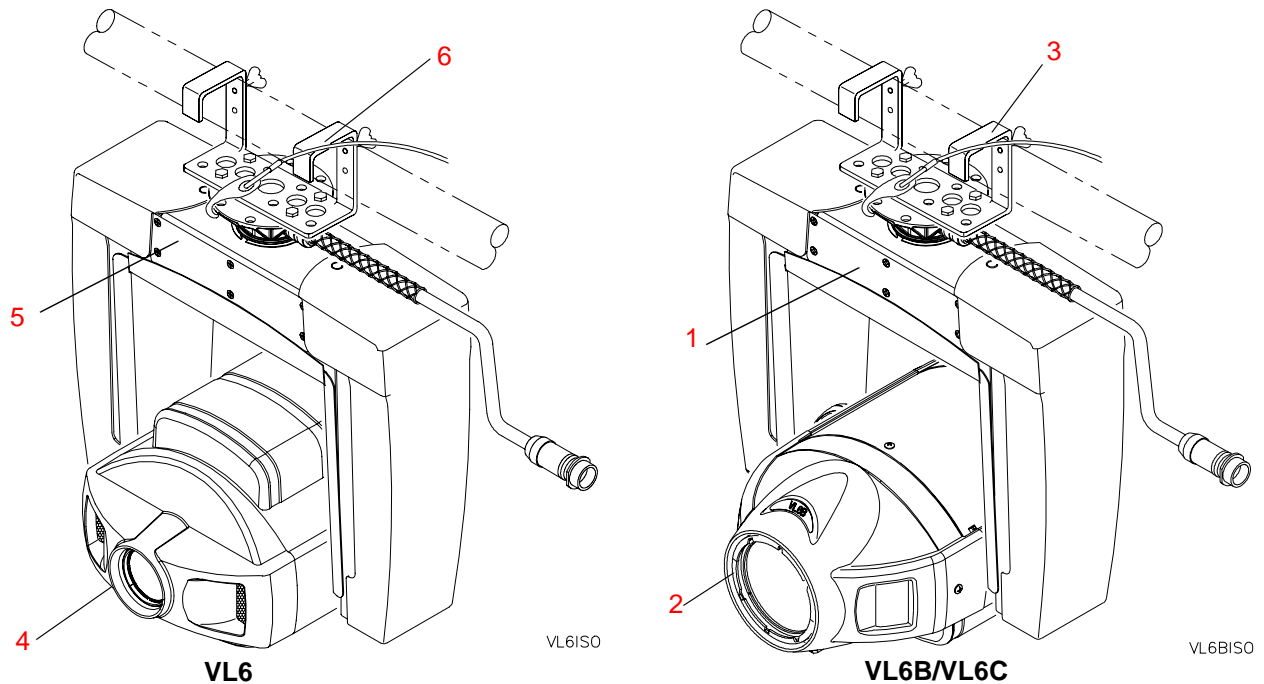


Figure 3-1 : VL6 and VL6B/VL6C Spot Luminaire

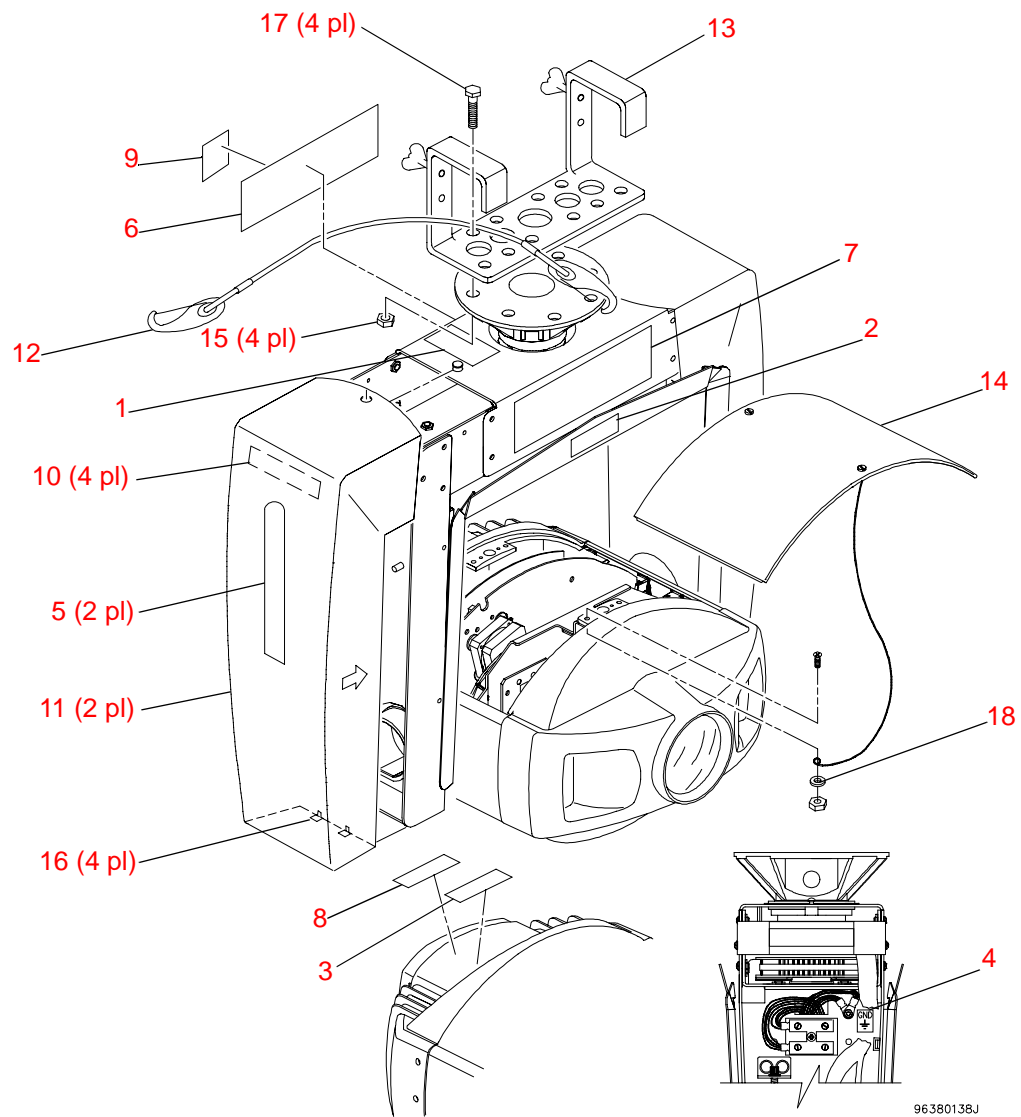
Covers and Hooks

Cover and Hook Assembly VL6

22.9638.0138

Refer to [Figure 3-2](#).

No.	Item	Qty	UM	Description
1	04.3001.0008	1	EA	LABEL, UL/CSA LISTED
2	04.3001.0010	1	EA	LABEL, CAUTION HAZARD OF ELECTRICAL SHOCK
3	04.3001.0011	1	EA	LABEL, DRY LOCATIONS EMPLACEMENTS SECS
4	04.4020.0001	1	EA	LABEL, GROUND
5	04.9634.0136	2	EA	LABEL VARI* <i>LITE</i> , YOKE LEG COVER
6	04.9638.0023	1	EA	LABEL, VL6 ID TAG (PATENT & TRADEMARK)
7	04.9638.0161	1	EA	LABEL, VL6 INPUT RATING
8	04.9638.0162	1	EA	LABEL VL6 RELAMPING
9	04.9638.0262	1	EA	LABEL VL6 PATENT
10	06.6018.0002	0.66	FT	VELCRO HOOK, 1" BLK ADHESIVE BACKED
11	10.9634.0134	2	EA	COVER, VL5 YOKE LEG
12	22.9634.0145	1	EA	ASSY, VL5 LAMP SAFETY CABLE
13	22.9634.0217	1	EA	ASSY, S300 HOOK/WING BOLT
14	22.9638.0049	1	EA	COVER ASSY, REMOVABLE, VL6
15	53.2025.0002	4	EA	NUT, 5/16-18 ZINC W/NYLON INSERT
16	53.6668.0001	4	EA	FASTENER, U-TYPE, SPRG. STEEL, BLK, TINNEMAN
17	53.7001.0003	4	EA	SCREW, 5/16-18 X 1" HEX HD CS ZINC GRD 5
18	55.6615.1001	1	EA	WASHER, .312" OD .172" ID .147" ID SHOULDER SS

Cover and Hook Assembly VL6 (cont.)**Figure 3-2: VL6 Cover and Hook Assembly**

Cover and Hook Assembly VL6B/VL6C

21.9660.0705

Refer to [Figure 3-3](#).

No.	Item	Qty	UM	Description
1	04.3001.0008	1	EA	LABEL, UL/CSA LISTED (VL6B ONLY)
2	04.3001.0011	1	EA	LABEL, DRY LOCATIONS EMPLACEMENTS SECS (VL6B ONLY)
3	04.4020.0001	1	EA	LABEL, GROUND
4	04.9634.0136	2	EA	LABEL VARI* <i>LITE</i> , YOKE LEG COVER
5	04.9638.0023	1	EA	LABEL, VL6 ID TAG (PATENT & TRADEMARK)(VL6B ONLY)
6	04.9638.0161	1	EA	LABEL, VL6 INPUT RATING (VL6B ONLY)
	04.9674.0503	1	EA	LABEL, CE ONLY (VL6C ONLY)
7	04.9638.0162	1	EA	LABEL VL6 RELAMPING (VL6B ONLY)
	04.9661.0034	1	EA	LABEL, RELAMPING -2000 SERIES (VL6C ONLY)
8	04.9638.0262	1	EA	LABEL, VL6 PATENT (VL6C ONLY)
9	04.9660.0353	2	EA	LABEL, FRONT HEAD -VL6B (VL6B ONLY)
	04.9674.0353	2	EA	LABEL, FRONT HEAD -VL6C (VL6C ONLY)
10	04.9673.0035	1	EA	LABEL, 700W ARC -VL2202/VL2402 (VL6C ONLY)
11	04.9674.0076	1	EA	LABEL VL6C (VL6C ONLY)
12	04.9674.0501	1	EA	LABEL, FCC (VL6C ONLY)
13	04.9674.0502	1	EA	LABEL, MODEL (VL6C ONLY)
14	06.6018.0002	1.00	FT	VELCRO HOOK, 1" BLK ADHESIVE BACKED
15	10.9634.0134	2	EA	COVER, VL5 YOKE LEG
16	22.9634.0145	1	EA	ASSY, VL5 LAMP SAFETY CABLE
17	22.9634.0217	1	EA	ASSY, S300 HOOK/WING BOLT
18	22.9660.0015	1	EA	COVER ASSY, REMOVABLE -VL6B
19	53.6668.0001	4	EA	FASTENER, U-TYPE, SPRG. STEEL, BLK, TINNEMAN
20	53.2025.0002	4	EA	NUT, 5/16-18 ZINC W/NYLON INSERT
21	53.7001.0003	4	EA	SCREW, 5/16-18 X 1" HEX HD CS ZINC GRD 5

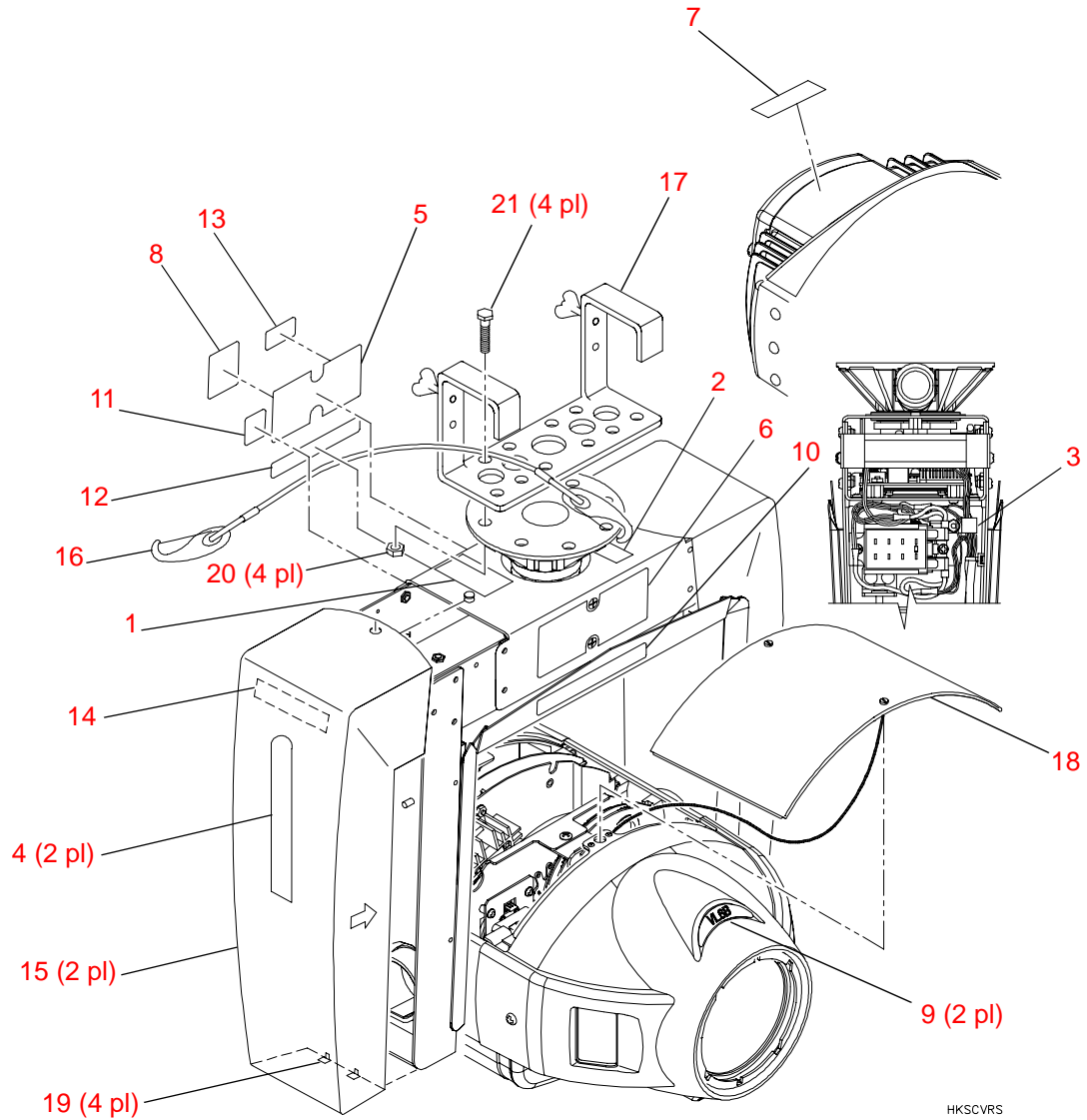
Covers and Hook Assembly VL6B/VL6C (cont.)

Figure 3-3: VL6B/VL6C Covers and Hook Assembly

Head

Head Assembly VL6

22.9638.0075

Refer to [Figure 3-4](#).

No.	Item	Qty	UM	Description
1	22.9638.0076	1	EA	BULKHEAD ASSY, COLOR, VL6
2	22.9638.0079	1	EA	REAR ASSY, VL6
3	22.9638.0082	1	EA	ASSY, BULKHD, DIMMER, VL6
4	22.9638.0083	1	EA	ASSY, COVERS, VL6
5	22.9638.0095	1	EA	FRONT ASSY, VL6
6	25.8005.0001	1	EA	CABLE ASSY, IGN6, #1
7	25.9638.0073	1	EA	CABLE ASSY, YOKE, VL6
8	53.6558.0001	2	EA	SCREW, 6-32 X 3/8" PPZ
9	53.6670.0001	2	EA	SCREW, 10-32 X 3" PPZ
10	55.3303.0006	2	EA	WASHER, #6 LOCK INT. TOOTH SS
11	71.2528.0400	1	EA	LAMP, 400 WATT SHORT ARC -VL6

Head Assembly VL6 (cont.)

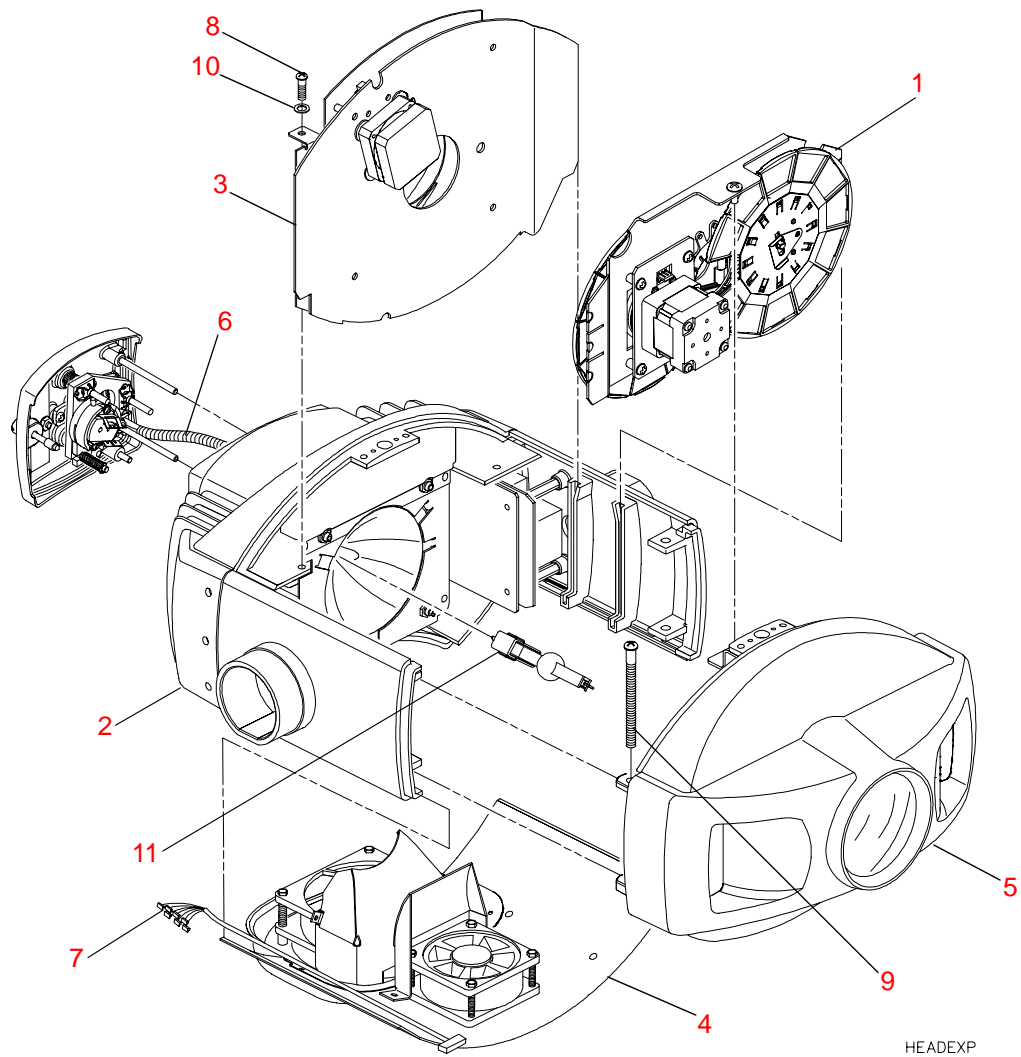


Figure 3-4: VL6 Head Assembly

Head Assembly VL6B/VL6C

21.9660.0700

Refer to [Figure 3-5](#)

No.	Item	Qty	UM	Description
1	21.9660.0302	1	EA	ASSY, REAR VL6B
2	22.9638.0082	1	EA	ASSY, BULKHD, DIMMER, VL6
3	22.9638.0083	1	EA	ASSY, COVERS, VL6 (VL6B ONLY)
	21.9674.0024	1	EA	ASSY, FAN COVER VL6C (VL6C ONLY)
4	22.9660.0164	1	EA	ASSY, BULKHEAD IRIS/GOBO/COLOR VL6B
5	22.9660.0305	1	EA	ASSY, FRONT VL6B/VL6C
6	22.9660.0370	1	EA	ASSY, FRONT COVER
7	22.9667.0031	1	EA	ASSY, TOP COVER REMOVABLE
	25.9638.0073	1	EA	CABLE ASSY, YOKE, VL6 (not shown)
	25.9660.0513	1	EA	CABLE ASSY, VL6B MOTOR HARNESS (not shown)
8	53.6524.0002	4	EA	SCREW, 6-32 X 5/16" PPB
9	53.6558.0001	2	EA	SCREW, 6-32 X 3/8" PPZ
10	53.6625.0001	2	EA	SCREW, 10-32 X 1/2" PPB

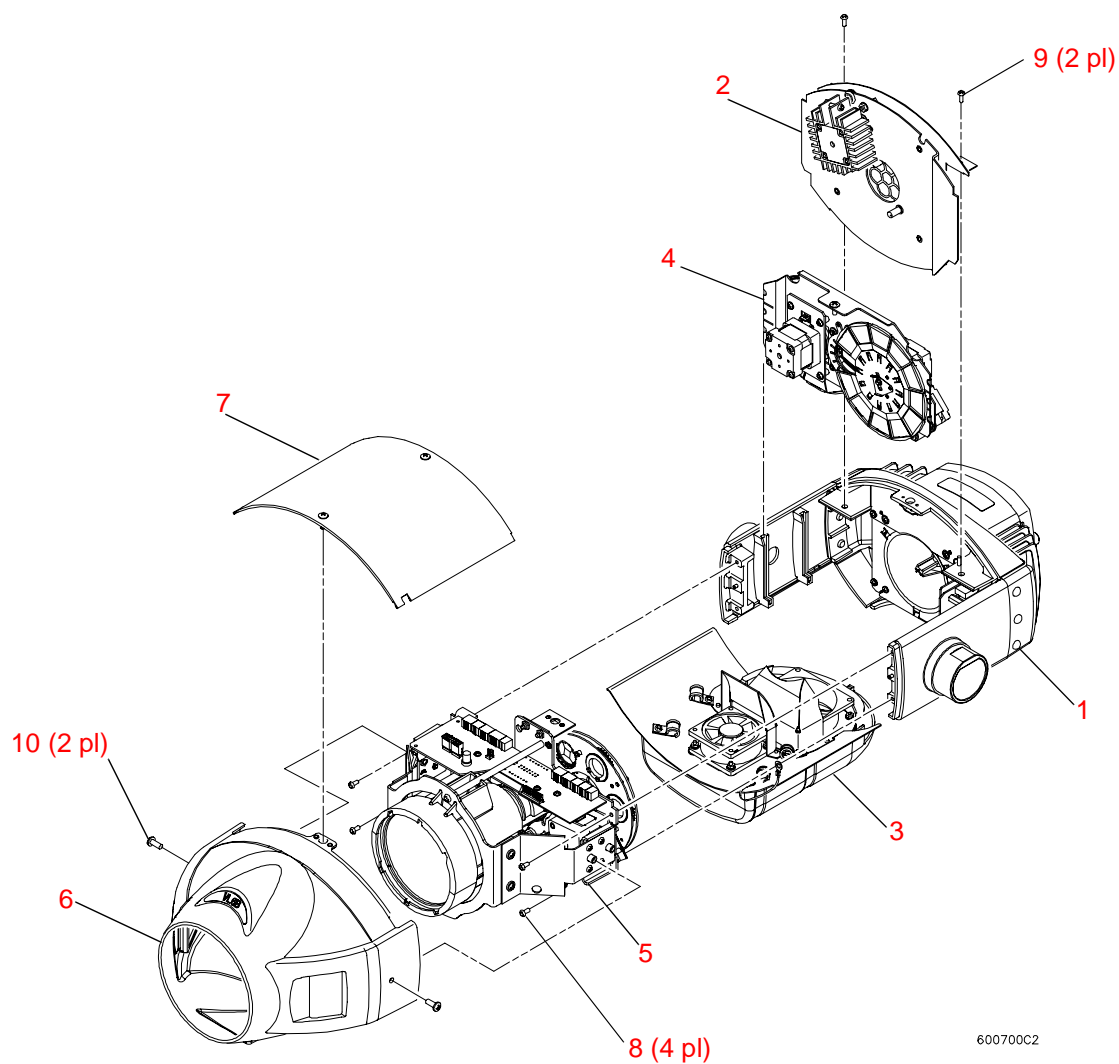
Head Assembly VL6B/VL6C (cont.)

Figure 3-5: VL6B/VL6C Head Assembly

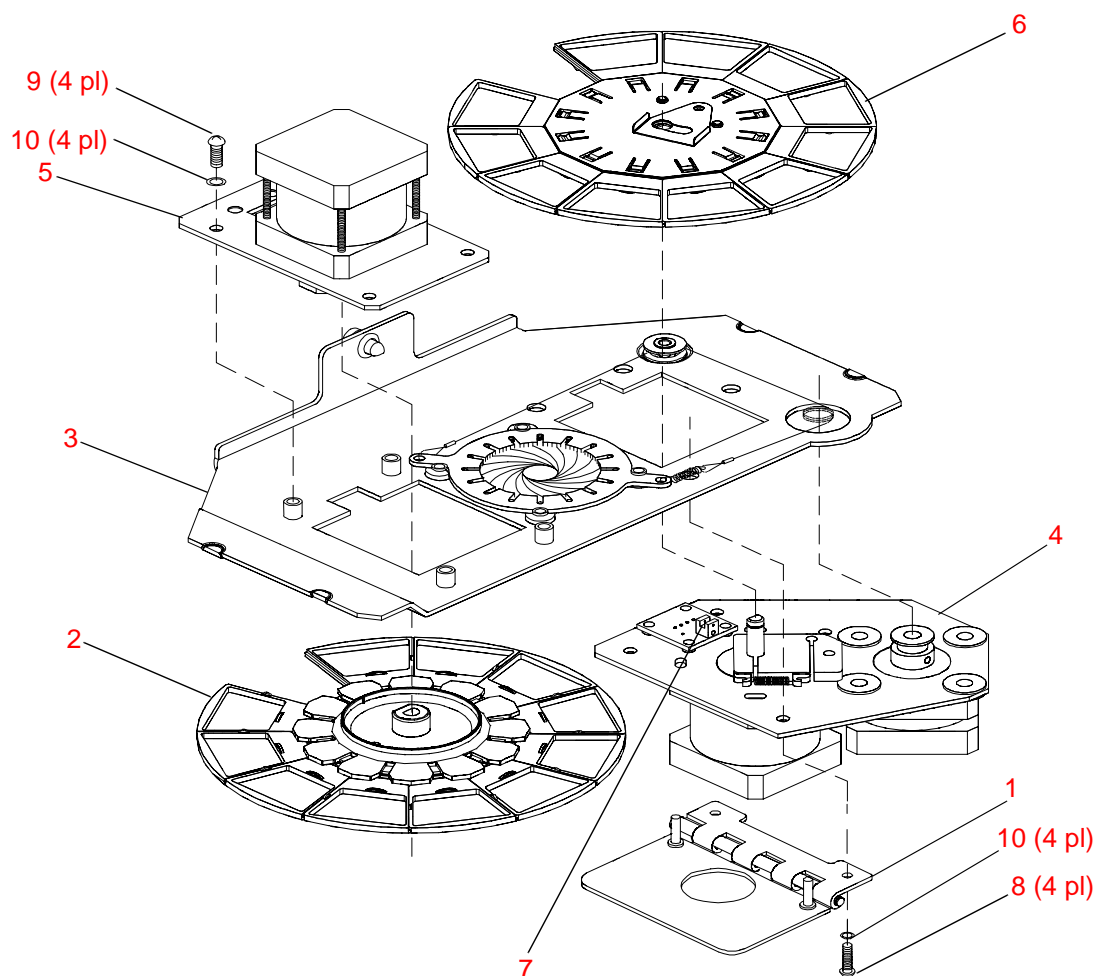
Color Bulkhead Assembly VL6/VL6B/VL6C

22.9638.0076 VL6

22.9660.0164 VL6B/VL6C

Refer to [Figure 3-6](#).

No.	Item	Qty	UM	Description
1	10.9638.0193	1	EA	SHIELD, HEAT, HINGED, COLOR BLKHD
2	22.9638.0077	1	EA	ASSY, VL6 GOBO WHEEL (VL6 ONLY)
	22.9660.0311	1	EA	ASSY, VL6B GOBO WHEEL (VL6B/VL6C ONLY)
3	22.9638.0078	1	EA	ASSY, BEAM SIZE IRIS, VL6
4	22.9638.0139	1	EA	ASSY, VL6 WHEEL1/BEAM IRIS MOTORS
5	22.9638.0140	1	EA	ASSY, VL6 WHEEL 2 MOTOR
6	22.9638.0142	1	EA	ASSY, VL6 FILTER WHEEL
7	52.6396.2604	1	EA	RECEPT, 4-POS MTA100 W/POL TAB BLUE CLSD END
8	53.5506.0375	4	EA	SCREW, 6-32 X 3/8" PPSS
9	53.5506.0437	4	EA	SCREW, 6-32 X 7/16" PPSS
10	55.3303.0006	8	EA	WASHER, LOCK, INT. TOOTH #6 SS

Color Bulkhead Assembly (cont.)**Figure 3-6: Color Bulkhead Assembly**

Gobo Wheel Assembly VL6/VL6B/VL6C

22.9638.0077 VL6

22.9660.0311 VL6B/VL6C

Refer to [Figure 3-7](#).

No.	Item	Qty	UM	Description
1	10.9638.0122	1	EA	CLIP, WHEEL RETAINER (VL6 ONLY)
2	22.9638.0021	1	EA	HUB ASSY, GOBO/FILTER, VL6 (VL6 ONLY)
3	22.9638.0155	1	EA	ASSY, VL6 WHEEL HUB W/CLIP (VL6B/VL6C ONLY)
-	10.9638.0122	1	EA	CLIP, WHEEL RETAINER (VL6B/VL6C ONLY)
-	22.9638.0021	1	EA	HUB ASSY, GOBO/FILTER, VL6 (VL6B/VL6C ONLY)
-	53.6530.0002	1	EA	RIVET, 1/8" OD POP .063-.125 GR. LENGTH (VL6B/VL6C ONLY)
4	41.6006.4009	1	EA	ASSY, VL6 GOBO, MEDIUM TRIANGLE (ST) (VL6 ONLY)
	41.6006.5009	1	EA	ASSY, VL6 GOBO, LIQUID TEXTURE (P.O.) (VL6B/VL6C ONLY)
5	41.6006.4201	1	EA	ASSY, VL6 GOBO, HORIZONTAL BARS (ST) (VL6 ONLY)
	41.6006.7008	1	EA	ASSY, VL6 GOBO, WAVE (ST) (VL6B/VL6C ONLY)
6	41.6006.4202	1	EA	ASSY, VL6 GOBO, VERTIVAL BARS (ST)
7	41.6006.5011	1	EA	ASSY, VL6 GOBO, NIGHT SKY (ST)
8	41.6006.5501	1	EA	ASSY, VL6 GOBO, LEAVES (ST)
9	41.6006.6001	1	EA	ASSY, VL6 GOBO, MEDIUM CIRCLE (ST)
10	41.6006.6006	1	EA	ASSY, VL6 GOBO, CIRCLE OF HOLES #3 (ST) (VL6 ONLY)
	41.6006.7029	1	EA	ASSY, VL6 GOBO, ALPHA RAYS (P.O.) (VL6B/VL6C ONLY)
11	41.6006.7001	1	EA	ASSY, VL6 GOBO, GLOBULAR BREAKUP (ST) (VL6 ONLY)
	41.6006.7025	1	EA	ASSY, VL6 GOBO, DUST BREAKUP (CA) (VL6B/VL6C ONLY)
12	41.6006.7002	1	EA	ASSY, VL6 GOBO, PEBBLES (ST)
13	41.6006.7008	1	EA	ASSY, VL6 GOBO, WAVE (ST) (VL6 ONLY)
	41.6006.5523	1	EA	ASSY, VL6 GOBO, TRIBAL BREAKUP (P.O.) (VL6B/VL6C ONLY)
14	41.6006.7015	1	EA	ASSY, VL6 GOBO, BLOCK BREAKUP (ST)
15	53.6530.0002	1	EA	RIVET, 1/8" OD POP .063 - .125 GR. LENGTH (VL6 ONLY)

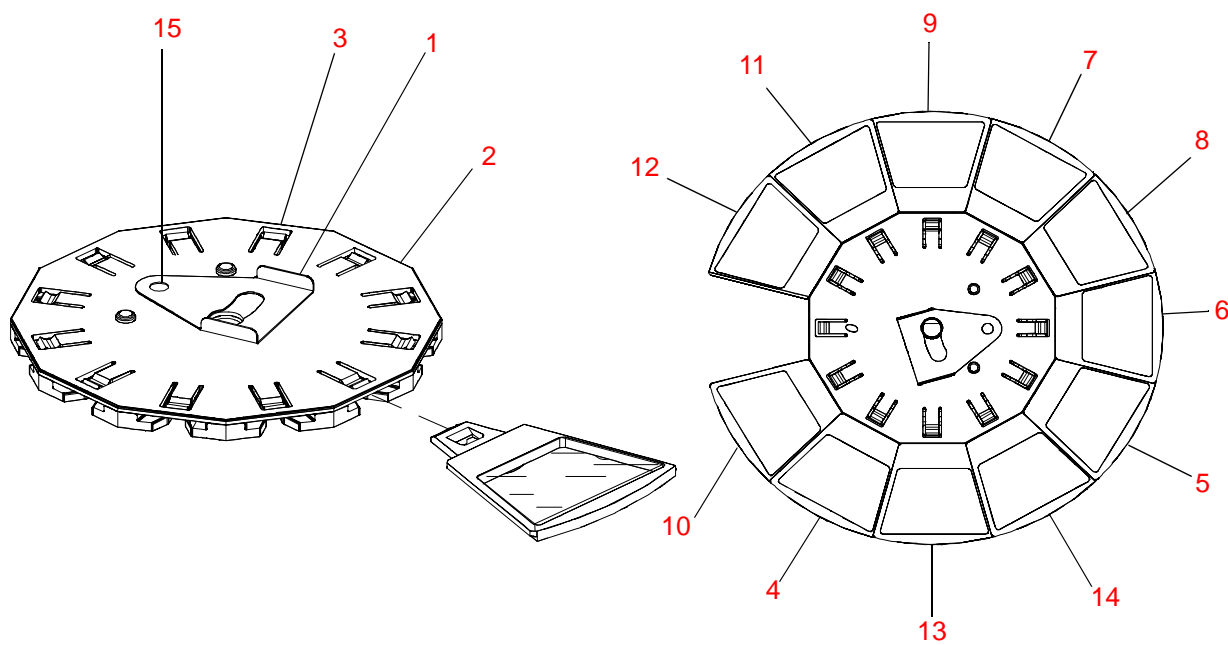
Gobo Wheel Assembly (cont.)

Figure 3-7: Gobo Wheel Assembly

Beam Size Iris Assembly VL6/VL6B/VL6C

22.9638.0078

Refer to [Figure 3-8](#).

No.	Item	Qty	UM	Description
1	10.9638.0016	1	EA	ACTUATOR, IRIS -VL6
2	12.9638.0200	16	EA	BEAM SIZE IRIS LEAF, BLACK COATING SPEC
3	22.9638.0111	1	EA	BULKHEAD, COLOR, VL6 (SHEETMETAL)
4	53.2009.0003	1	EA	NUT, 2-56 LOCK NYLON INSERT STOP
5	53.2200.0004	1	EA	NUT, 4-40 KEPS SS
6	53.5804.0187	1	EA	SCREW, 4-40 X 3/16" SCSS
7	53.6659.0010	1	EA	SCREW, 2-56 X 1/2" PFZ
8	53.6661.0003	4	EA	SCREW, 0-80 X 3/16" LG PFSS
9	54.1209.0003	4	EA	BEARING, .093 ID X 3/16 OD
10	54.2003.0003	1	EA	PULLEY, IDLER, -VL6
11	55.2122.0001	1	EA	SPRING, TENSION SS
12	55.2185.0001	2	EA	SLEEVE, LOOP .015 TO .022 BRASS
13	55.2233.0003	1	EA	RETAINER, PUSH-ON TYPE (VL4)
14	55.2233.0004	1	EA	STUD, 1/4 TURN, OPR .415L, STEEL ZINC
15	55.6675.0002	1	EA	EYELET, 1/8" OD X .156" L ROLLED FLANGE
16	73.7024.0001	1.25	FT	CBL, STAINLESS STEEL TEFLON COATED

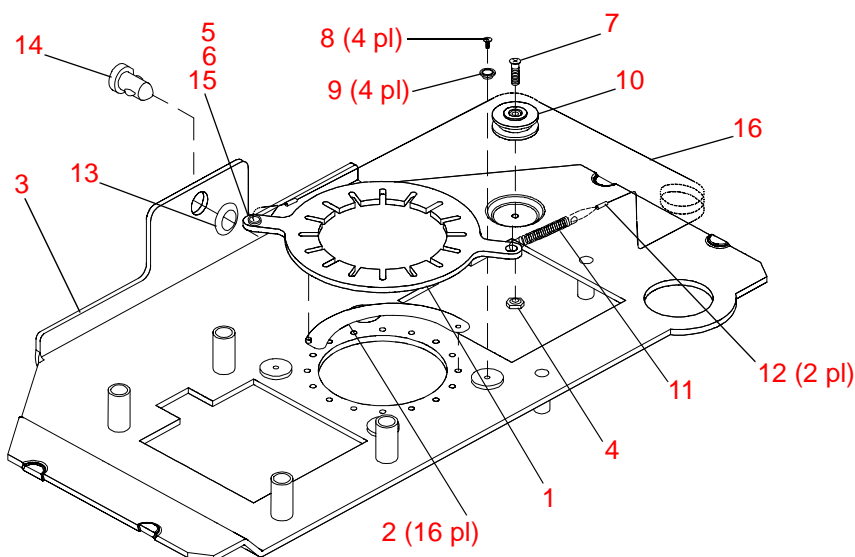


Figure 3-8: Beam Size Iris Assembly

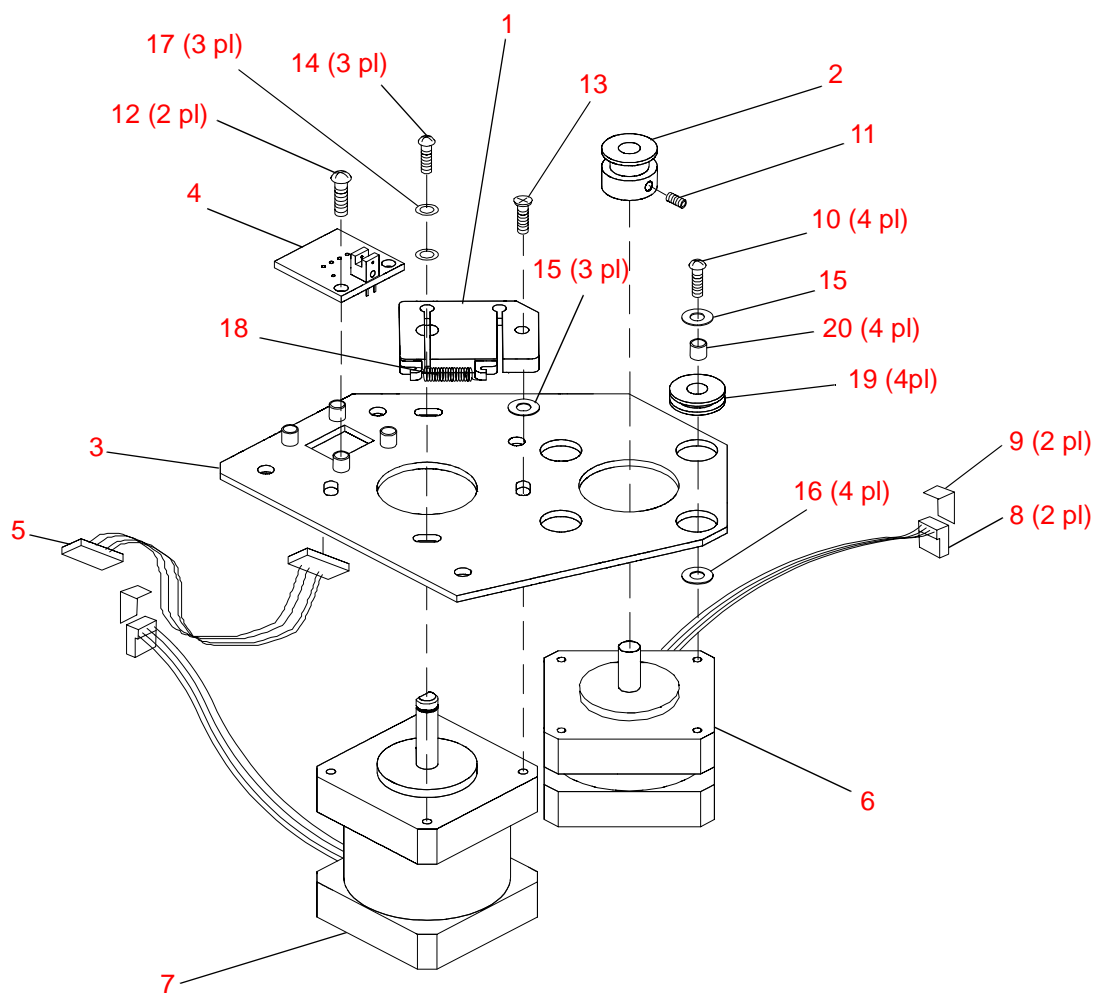
Wheel1/Beam Iris Motors Assembly VL6/VL6B/VL6C

22.9638.0139

Refer to [Figure 3-9](#).

No.	Item	Qty	UM	Description
1	10.9621.0097	1	EA	STABILIZER, STEPPER, GOBO WHEEL
2	10.9637.0038	1	EA	PULLEY, MOTOR, BEAM IRIS, VL2C
3	10.9638.0118	1	EA	MOUNT, MOTOR, IRIS & WHEEL
4	24.9638.0113	1	EA	PCB ASSY, SENSOR, VL6
5	25.9638.0149	1	EA	CABLE ASSY, JUMPER, WH1 SENSOR
6	44.9638.0018	1	EA	MOTOR, B/S IRIS, 1.8DEG, VL6
7	44.9638.0375	1	EA	MOTOR, STEPPER, 3.75DEG, VL6
8	52.6396.2604	2	EA	RECEPT, 4-POS MTA100 W/POL TAB BLUE CLSD END
9	52.6424.0004	2	EA	COVER, 4-POS CLOSED END STRAIN RELIEF - MTA
10	53.6520.0001	4	EA	SCREW, 4-40 X 3/8" PPZ
11	53.6578.0001	1	EA	SCREW, 4-40 X 1/8" SET
12	53.6597.0001	2	EA	SCREW, 4-40 X 3/16" PPZ
13	53.6599.0001	1	EA	SCREW, 4-40 X 3/8" PFZ
14	55.2203.0001	3	EA	SCREW, 4-40 X 1/4" PPZ
15	55.3301.0004	4	EA	WASHER, #4 FLAT SS
16	55.3301.0006	4	EA	WASHER, #6 FLAT SS
17	55.3303.0004	3	EA	WASHER, #4 LOCK, INT.TOOTH SS
18	55.6568.0016	1	EA	SPRING, EXTSN 1/25" OD .500" LG .018" WIRE DIA SS
19	55.6579.0005	4	EA	GROMMET, 3/8" HOLE 3/16" ID
20	55.6595.0004	4	EA	SPACER, 3/16 OD X .171L X #4 HOLE, ALUM.

Wheel1/Beam Iris Motors Assembly (cont.)



MOTR1EXP

NOTE: Item 11 used only on luminaires with serial numbers VL60000001 - VL60000750.

Figure 3-9: Wheel1/Beam Iris Motors Assembly

Sensor PCB Assembly VL6/VL6B/VL6C

24.9638.0113

Refer to [Figure 3-10](#).

No.	Item	Qty	UM	Description
1	11.9638.0114	1	EA	PCB, SENSOR, VL6
2	52.6229.0001	1	EA	HEADER, 3-POS MTA FRIC LOK STRT POST
3	60.1429.1503	1	EA	RES, 1/4W 5% 150.0 OHM CF
4	86.7004.0001	1	EA	SENSOR, OPTICAL, GP1S23

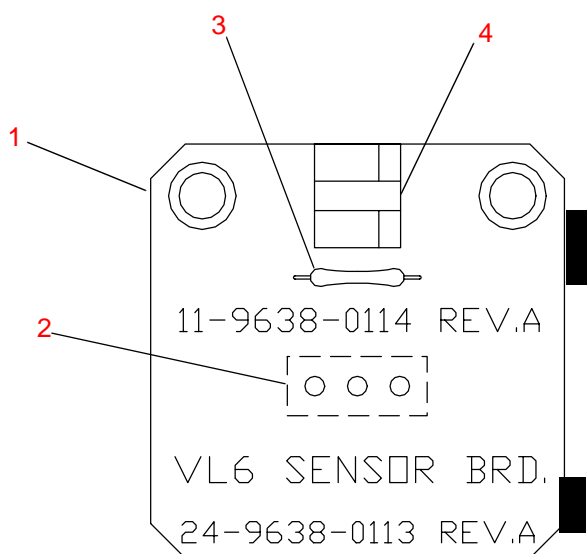


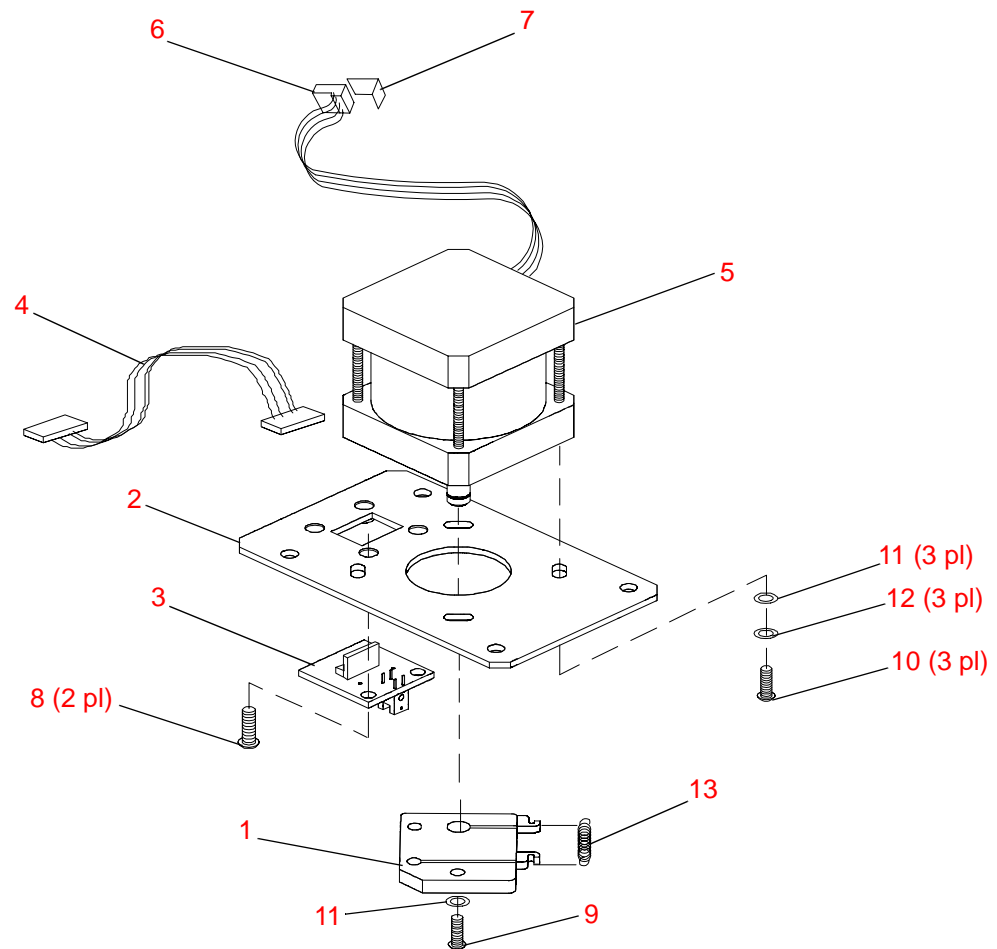
Figure 3-10: Sensor PCB Assembly

Wheel 2 Motor Assembly VL6/VL6B/VL6C

22.9638.0140

Refer to [Figure 3-11](#).

No.	Item	Qty	UM	Description
1	10.9621.0097	1	EA	STABILIZER, STEPPER, GOBO WHEEL
2	10.9638.0119	1	EA	MOUNT, MOTOR, WHEEL
3	24.9638.0113	1	EA	PCB ASSY, SENSOR, VL6
4	25.9638.0150	1	EA	CABLE ASSY, JUMPER, WH2 SENSOR
5	44.9638.0375	1	EA	MOTOR, STEPPER, 3.75 DEG, VL6
6	52.6396.2604	1	EA	RECEPT, 4-POS MTA100 W/POL TAB BLUE CLSD END
7	52.6424.0004	1	EA	COVER, STRAIN RELIEF/4-POS MTA
8	53.6597.0001	2	EA	SCREW, 4-40 X 3/16" PPZ
9	53.6599.0001	1	EA	SCREW, 4-40 X 3/8" PFZ
10	55.2203.0001	3	EA	SCREW, 4-40 X 1/4" PPZ
11	55.3301.0004	4	EA	WASHER, #4 FLAT SS
12	55.3303.0004	3	EA	WASHER, #4 LOCK, INT. TOOTH SS
13	55.6568.0016	1	EA	SPRING, EXTSN 1/25" OD .500" LG .018" WIRE DIA SS

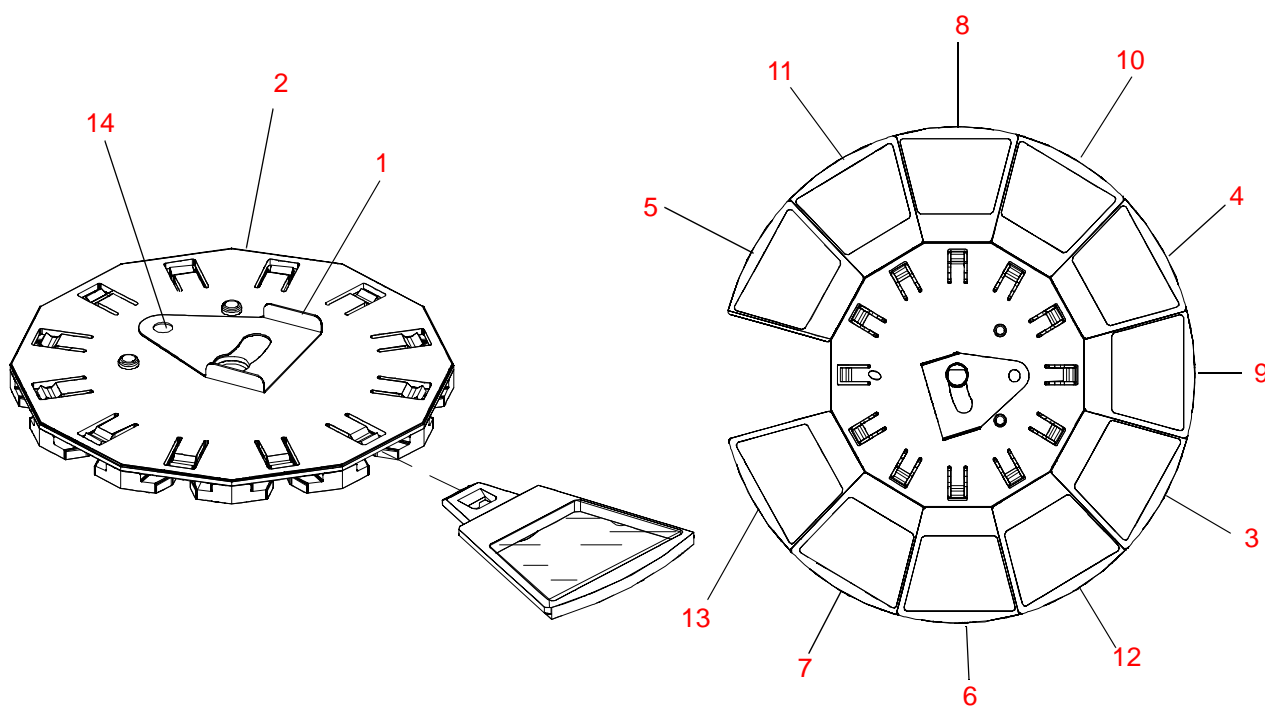
Wheel 2 Motor Assembly VL6/VL6B/VL6C (cont.)**Figure 3-11: Wheel 2 Motor Assembly**

Filter Wheel Assembly VL6/VL6B/VL6C

22.9638.0142

Refer to [Figure 3-12](#).

No.	Item	Qty	UM	Description
1	10.9638.0122	1	EA	CLIP, WHEEL RETAINER (VL6/VL6B ONLY)
2	22.9638.0021	1	EA	HUB ASSY, GOBO/FILTER, VL6 (VL6/VL6B ONLY)
	22.9673.0143	1	EA	ASSY, FILTER WHEEL HUB AND CLIP (VL6C ONLY)
-	10.9638.0122	1	EA	CLIP, WHEEL RETAINER (VL6C ONLY)
-	22.9673.0142	1	EA	ASSY, COLOR WHEEL (VL6C ONLY)
-	53.6350.0002	1	EA	RIVET, POP 1/8"OD X .063-.125 GR. LENGTH (VL6C ONLY)
3	41.6006.0020	1	EA	ASSY, VL6 FILTER, MAGENTA (ST)
4	41.6006.0150	1	EA	ASSY, VL6 FILTER, PINK (ST)
5	41.6006.0240	1	EA	ASSY, VL6 FILTER, LIGHT RED (ST)
6	41.6006.0320	1	EA	ASSY, VL6 FILTER, BASTARD AMBER #1 (ST)
7	41.6006.0440	1	EA	ASSY, VL6 FILTER, ORANGE (ST)
8	41.6006.0540	1	EA	ASSY, VL6 FILTER, YELLOW (ST)
9	41.6006.0660	1	EA	ASSY, VL6 FILTER, GREEN (ST)
10	41.6006.0820	1	EA	ASSY, VL6 FILTER, LT. BLUE-GREEN (ST)
11	41.6006.0850	1	EA	ASSY, VL6 FILTER, BLUE (ST)
12	41.6006.0960	1	EA	ASSY, VL6 FILTER, LAVENDER (ST)
13	41.6006.0990	1	EA	ASSY, VL6 FILTER, UV (ST)
14	53.6530.0002	1	EA	RIVET, POP 1/8"OD X .063-.125 GR. LENGTH (VL6/VL6B ONLY)

Filter Wheel Assembly VL6/VL6B/VL6C (cont.)**Figure 3-12: Filter Wheel Assembly**

Rear Assembly VL6

22.9638.0079

Refer to [Figure 3-13](#).

No.	Item	Qty	UM	Description
1	10.9638.0052	1	EA	DAM, AIR, VL6
2	22.9638.0080	1	EA	ASSY, VL6 LAMP
3	22.9638.0088	1	EA	ASSY, REAR CASTING AND SIDE RAILS
4	22.9638.0110	1	EA	ASSY, VL6 REFLECTOR
5	23.9638.0136	1	EA	ASSY, VL6 IGNITOR BOARD IGN6
6	25.9638.0201	1	EA	CABLE ASSY, GROUND CABLE - VL6
7	53.2200.0006	2	EA	NUT, 6-32 KEPS SS
8	53.6525.0001	4	EA	SCREW, 6-32 X 5/16" PPZ
9	53.6534.0004	2	EA	RIVET, 3/32" OD POP 3/16 GRIP L STEEL
10	53.6613.0001	2	EA	SCREW, 6-32 X 1/2" PPZ
11	55.2132.0006	2	EA	STANDOFF, 1/4" HEX 6-32 1.188" LG M/F SS
12	55.2182.0001	1	EA	GROMMET
13	55.2233.0001	1	EA	RECEPTACLE, 1/4 TURN (VL4)
14	55.3303.0006	6	EA	WASHER, #6 LOCK, INT. TOOTH SS
15	55.6579.0004	1	EA	GROMMET, 3/4" HOLE 9/16" ID

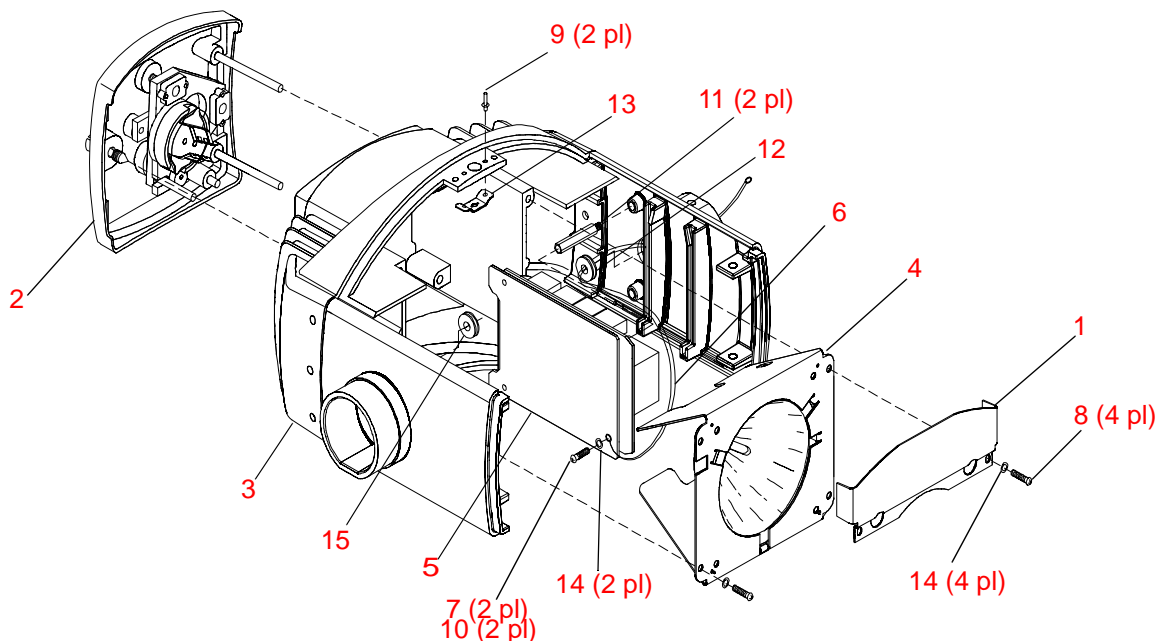


Figure 3-13: VL6 Rear Assembly

Rear Assembly VL6B/VL6C

21.9660.0302

Refer to [Figure 3-14](#).

No.	Item	Qty	UM	Description
1	10.9638.0052	1	EA	DAM, AIR, VL6
2	10.9660.0360	1	EA	CHAFE PAD, VL6B
3	22.9660.0306	1	EA	ASSY, REAR CASTING/SIDE RAILS, VL6B
4	21.9660.0340.01	1	EA	ASSY, REFLECTOR -VL6/VL6B (VL6B ONLY)
	21.9660.0340.03	1	EA	ASSY, REFLECTOR, LUMINAIRE (VL6C ONLY)
5	22.9660.0315	1	EA	ASSY, LAMP VL6B (VL6B ONLY)
	22.9674.0404	1	EA	ASSY, BACK CAP (VL6C ONLY)
6	23.9660.0520	1	EA	ASSY, IGNITOR BOARD/CABLE -VL6B
7	53.6525.0001	4	EA	SCREW, 6-32 X 5/16" PPZ
8	53.6534.0004	1	EA	RIVET, 3/32" OD POP 3/16 GRIP L STEEL
9	53.6613.0001	2	EA	SCREW, 6-32 X 1/2" PPZ
10	55.2132.0006	2	EA	STANDOFF, 1/4" HEX 6-32 X 1.188" LG M/F SS
11	55.2233.0001	1	EA	RECEPTACLE, 1/4 TURN (VL4)
12	55.3303.0006	6	EA	WASHER, #6 LOCK, INT. TOOTH SS

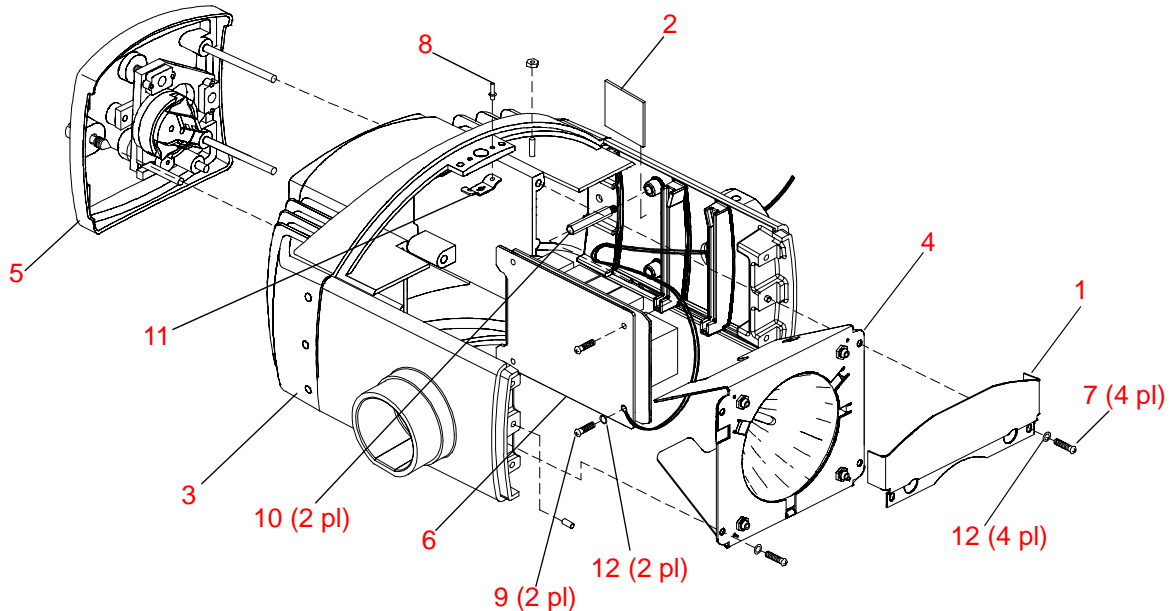


Figure 3-14: VL6B/VL6C Rear Assembly

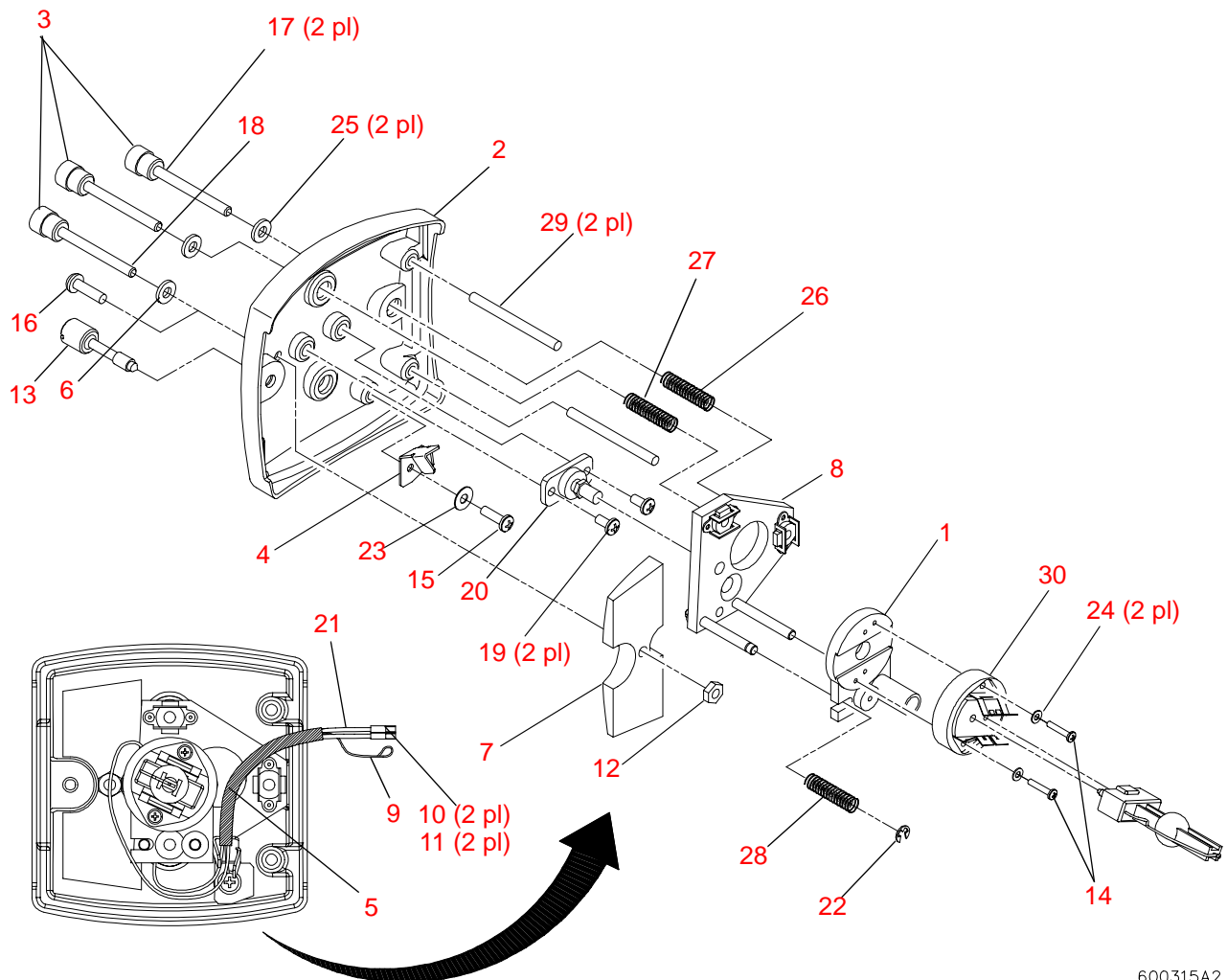
Lamp Assembly VL6/VL6B

22.9638.0080 VL6
22.9660.0315 VL6B

Refer to [Figure 3-15](#).

No.	Item	Qty	UM	Description
1	10.9620.0240	1	EA	CARRIAGE, UNIVERSAL, LAMP
2	10.9638.0034	1	EA	CASTING, BACK CAP, VL6
3	10.9638.0117	3	EA	KNOB, KNURLED, VL6 BACK CAP/LAMP ASSY
4	10.9638.0128	1	EA	BRACKET, IGNITOR CABLE
5	10.9638.0130	1	EA	SPRING, BULB WIRE SHEATH
6	10.9638.0164	1	EA	WASHER, FELT
7	10.9638.0188	1	EA	COUNTERWEIGHT, WIDE ANGLE LENS (USED WITH WIDE AND MEDIUM ANGLE LENSES ONLY) (VL6 ONLY)
	10.9660.0352	1	EA	COUNTERWEIGHT, VL6B (VL6B ONLY)
8	22.9631.0001	1	EA	ASSY, VL2B LAMP TILT PLATE
9	22.9638.0129	1	EA	TETHER, VL6 BACKCAP
10	52.6362.0001	2	EA	CONN HOUSING, 30 SERIES RED
11	52.8247.0001	2	EA	CRIMP CONTACT, S30 TIN (REEL)
12	53.2001.0001	1	EA	NUT, 10-32 KEPS ZINC PLATED
13	53.5638.1250	1	EA	SCREW, 1/4-28 X 1 1/4" CAPTIVE
14	53.6519.0001	2	EA	SCREW, 4-40 X 5/8" PPZ VL-1
15	53.6525.0001	1	EA	SCREW, 6-32 X 5/16" PPZ
16	53.6538.0001	1	EA	SCREW, 10-32 KEPS X 7/8" PPB
17	53.6539.0010	2	EA	SCREW, 10-32 X 2-1/2" PFBSS UNF-2A
18	53.6539.0012	1	EA	SCREW, 10-32 X 2" PFBSS UNF-2A
19	53.6546.0002	2	EA	SCREW, 8-32 X 5/16" PPZ
20	54.1209.0002	1	EA	SWIVEL BEARING ASSY, .385 STUD LNGTH
21	55.2200.0002	1.83	FT	SLEEVING, .162 ID SILICONE RUBBER COATED FIBERGLASS (VL6 ONLY)
	55.2260.0208	1.92	FT	SLEEVING, FIBERGLASS 0.208 ID (VL6B ONLY)
22	55.2234.0001	1	EA	E-RING, .188 SHAFT DIA. CAR SPR STL
23	55.3301.0006	1	EA	WASHER, #6 FLAT SS
24	55.6537.0001	2	EA	WASHER, #4 LOCK INTERNAL TOOTH
25	55.6540.0001	2	EA	WASHER, #10 FLAT BRASS
26	55.6568.0013	1	EA	SPRING, CPRSN 1" - (VL2B)
27	55.6568.0017	1	EA	SPRING, CPRSN .480" OD .500" LG SS
28	55.6568.0020	1	EA	SPRING, CPRSN .300" OD .837" LG SS
29	55.6612.0005	2	EA	PIN, 3/16 OD X 2 3/4 L TYPE C LOW CARBON STEEL
30	71.2502.0002	1	EA	SOCKET, LAMP GY9.5

Lamp Assembly VL6B/VL6C (cont.)



600315A2

Figure 3-15: VL6B/VL6C Lamp Assembly

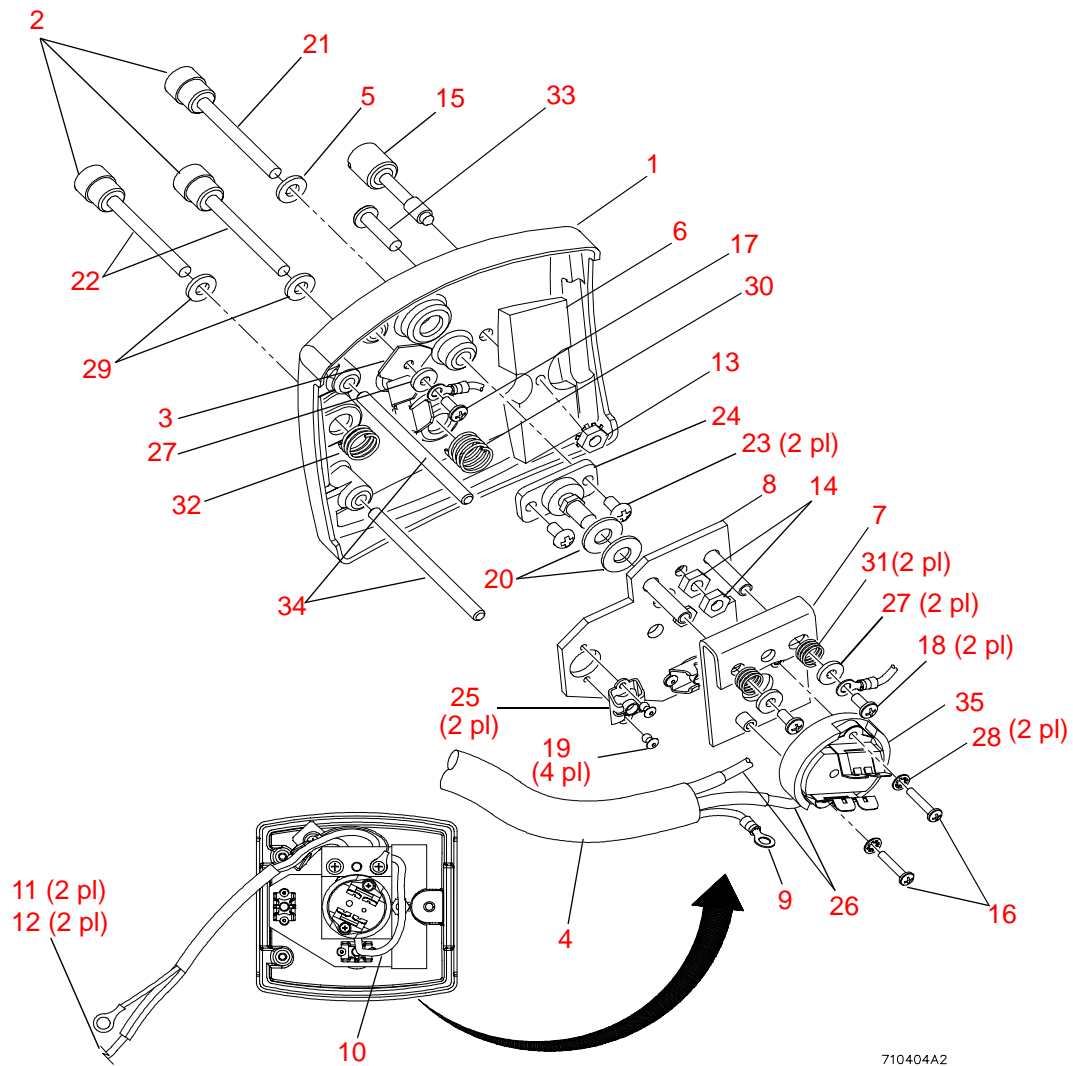
Back Cap Assembly VL6C

22.9674.0404

Refer to [Figure 3-16](#).

No.	Item	Qty	UM	Description
1	10.9638.0034	1	EA	CASTING, BACK CAP, VL6
2	10.9638.0117	3	EA	KNOB, KNURLED, VL6 BACK CAP/LAMP ASSY
3	10.9638.0128	1	EA	BRACKET, IGNITOR CABLE
4	10.9638.0130	1	EA	SPRING, BULB WIRE SHEATH
5	10.9638.0164	1	EA	WASHER, FELT
6	10.9660.0352	1	EA	COUNTERWEIGHT, VL6B
7	10.9667.0411	1	EA	LAMP CARRIAGE
8	10.9667.0412	1	EA	LAMP TILT PLATE
9	22.9638.0129	1	EA	TETHER, VL6 BACKCAP
10	25.9667.0413	1	EA	CABLE ASSY, GROUND -TILT PLATE
-	52.8311.0003	2	EA	TERM, RING #6 14-16AWG NON-INS. TAPE
-	73.7130.0002	0.21	FT	WIRE, 7/64" TUBULAR BRAID SILVER-PLATED
11	52.6362.0001	2	EA	CONN HOUSING, 30 SERIES RED
12	52.8247.0001	2	EA	CRIMP CONTACT, S30 TIN (REEL)
13	53.2200.0010	1	EA	NUT, 10-32 KEPS SS
14	53.2201.0010	2	EA	NUT, 10-32 HEX SS
15	53.5638.1250	1	EA	SCREW, 1/4-28 X 1 1/4" CAPTIVE
16	53.6519.0001	2	EA	SCREW, 4-40 X 5/8" PPZ VL-1
17	53.6525.0001	1	EA	SCREW, 6-32 X 5/16" PPZ
18	53.6526.0001	2	EA	SCREW, 6-32 X 5/8" PPZ
19	53.6534.0002	4	EA	RIVET, 3/32" OD POP 3/16 GRIP RNG ALUM
20	53.6539.0008	2	EA	WASHER, 1/4" FLAT SS
21	53.6539.0011	1	EA	SCREW, 10-32 X 2 1/4" PFBSS UNF-2A
22	53.6539.0012	2	EA	SCREW, 10-32 X 2" PFBSS UNF-2A
23	53.6546.0002	2	EA	SCREW, 8-32 X 5/16" PPZ
24	54.1209.0002	1	EA	SWIVEL BEARING ASSY, .385 STUD LNGTH
25	55.2134.0003	2	EA	PLATE, FLOATING NUT 10-32
26	55.2260.0208	1.92	FT	SLEEVING, FIBERGLASS 0.208 ID
27	55.3301.0006	3	EA	WASHER, #6 FLAT SS
28	55.3303.0004	2	EA	WASHER, #4 LOCK INT.TOOTH SS
29	55.6540.0001	2	EA	WASHER, #10 FLAT BRASS
30	55.6568.0017	1	EA	SPRING, CPRSN .480" OD 1.500" LG SS
31	55.6568.0036	2	EA	SPRING, CPRSN .360" OD .690" LG .032" WIRE DIA SS
32	55.6568.0048	1	EA	SPRING, CPRSN .480" OD 1.000" LG SS
33	55.6575.0001	1	EA	SCREW, 10-32 X 3/4" PPB
34	55.6612.0005	2	EA	PIN, 3/16 OD X 2 3/4 L TYPE C LOW CARBON STEEL
35	71.2502.0002	1	EA	SOCKET, LAMP GY9.5

Back Cap Assembly VL6C (cont.)



710404A2

Figure 3-16: VL6C Back Cap Assembly

Reflector Assembly VL6

22.9638.0110

Refer to [Figure 3-17](#).

No.	Item	Qty	UM	Description
1	10.9638.0057	4	EA	CLIP, MOUNTING, REFLECTOR, VL6
2	22.9638.0053	1	EA	MOUNT ASSY, REFLECTOR, VL6
3	41.9637.0012	1	EA	REFLECTOR, COLD MIRROR, VL2C
4	53.6525.0001	4	EA	SCREW, 6-32 X 5/16" PPZ

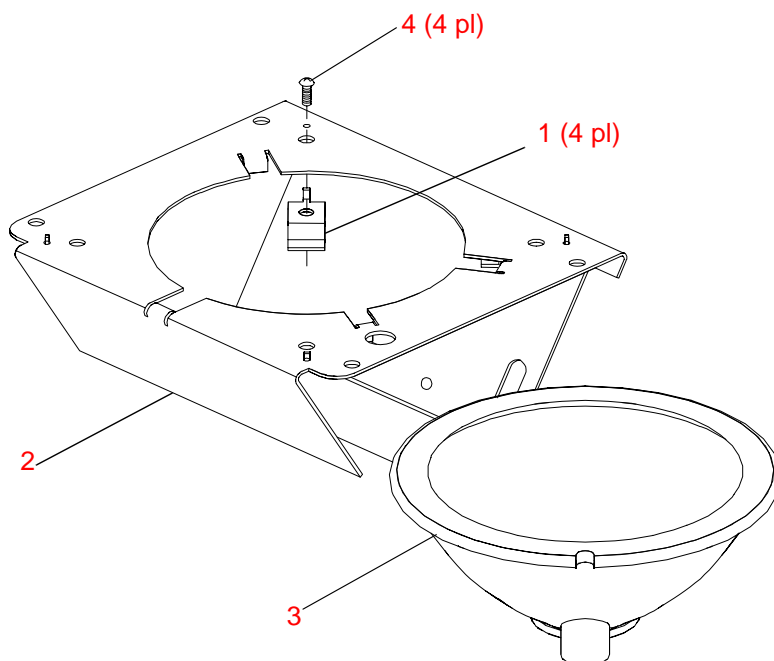


Figure 3-17: VL6 Reflector Assembly

Reflector Assembly VL6B/VL6C

21.9660.0340.01 VL6B
21.9660.0340.03 VL6C

Refer to [Figure 3-18](#).

No.	Item	Qty	UM	Description
1	10.9638.0057	4	EA	CLIP, MOUNTING, REFLECTOR, VL6
2	12.9660.0073	1	EA	ELLIPSOIDAL REFLECTOR (VL6B ONLY)
	41.9660.0021	1	EA	ELLIPSOIDAL REFLECTOR - 45 LUNES (VL6C ONLY)
3	22.9660.0334	1	EA	FAB ASSY, REFLECTOR MOUNT -VL6/VL6B (VL6B ONLY)
	22.9673.0333	1	EA	FAB ASSY, REFLECTOR MOUNT (VL6C ONLY)
4	22.9660.0338	1	EA	ASSY, DISCONNECT LAMP -VL6B
-	10.9660.0335	1	EA	CONTACT, CONTACT DISCONNECT LAMP -VL6B
-	10.9660.0336	1	EA	INSULATOR, DISCONNECT -VL6B
-	53.6534.0365	2	EA	RIVET, 3/32" OD POP .365L .126-.250 GRIP AL5052
-	55.3301.0003	2	EA	WASHER, FLAT #2 AN, ID .099" X OD .250"
5	53.6525.0001	4	EA	SCREW, 6-32 X 5/16" PPZ
6	53.6599.0001	2	EA	SCREW, 4-40 X 3/8" PFZ

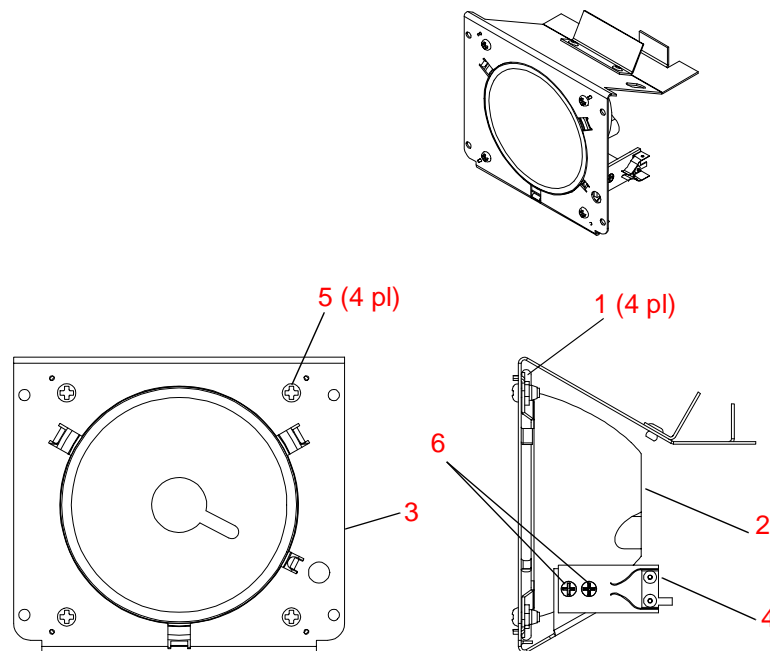


Figure 3-18: VL6B/VL6C Reflector Assembly

Ignitor Board Assembly VL6

23.9638.0136

Refer to [Figure 3-19](#).

No.	Item	Qty	UM	Description
1	10.9638.0064	1	EA	BRACKET, MOUNTING, IGN6 PCB
2	24.9638.0066	1	EA	PCB ASSY, IGNITOR, IGN6
3	25.9638.0202	1	EA	CABLE ASSY, IGNITOR
4	53.2016.0002	2	EA	NUT, 4-40 HEX ZINC
5	53.6596.0001	2	EA	SCREW, 4-40 X 5/16" PPZ
6	53.6613.0375	2	EA	SCREW, 6-32 X 3/8" PPN NYLON
	55.2186.0001	1	EA	CABLE TIE, .10" WD 4.00 LG SMALL (not shown)

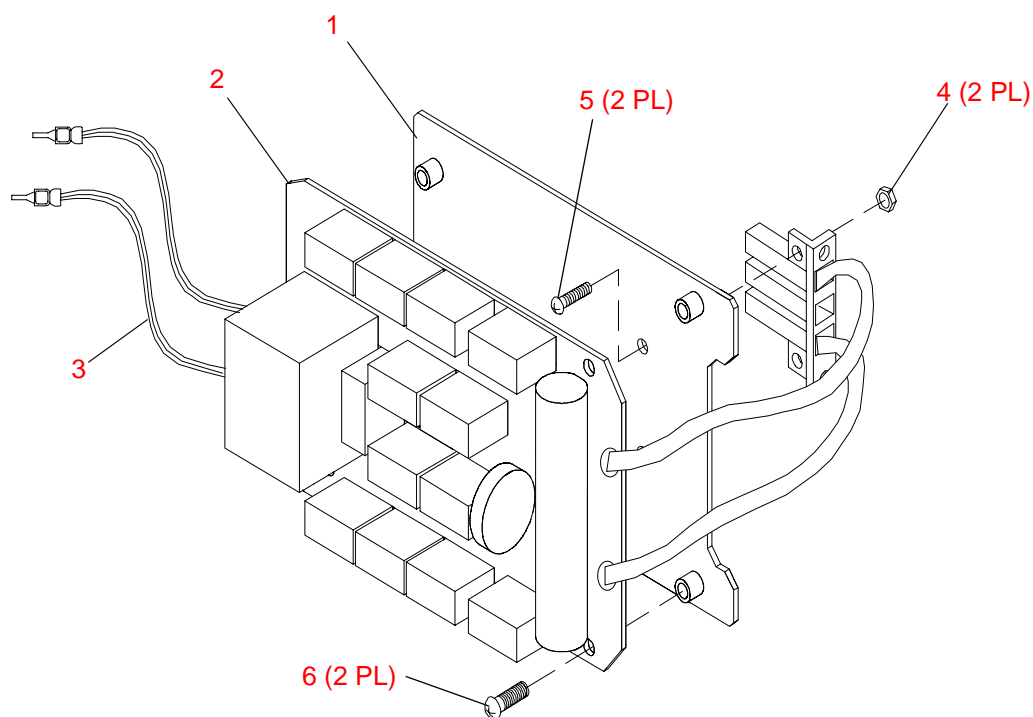


Figure 3-19: VL6 Ignitor Board Assembly

Ignitor Board/Cable Assembly VL6B/VL6C

23.9660.0520

Refer to [Figure 3-20](#).

No.	Item	Qty	UM	Description
1	12.9660.0519	1	EA	SLEEVING, IGNITOR/GROUND CABLES -VL6B
2	23.9660.0505	1	EA	ASSY, IGNITOR BOARD VL6/VL6B
3	25.9638.0201	1	EA	CABLE ASSY, GROUND CABLE -VL6
4	55.2186.0001	2	EA	CABLE TIE, .10" WD 4.00 LG SMALL

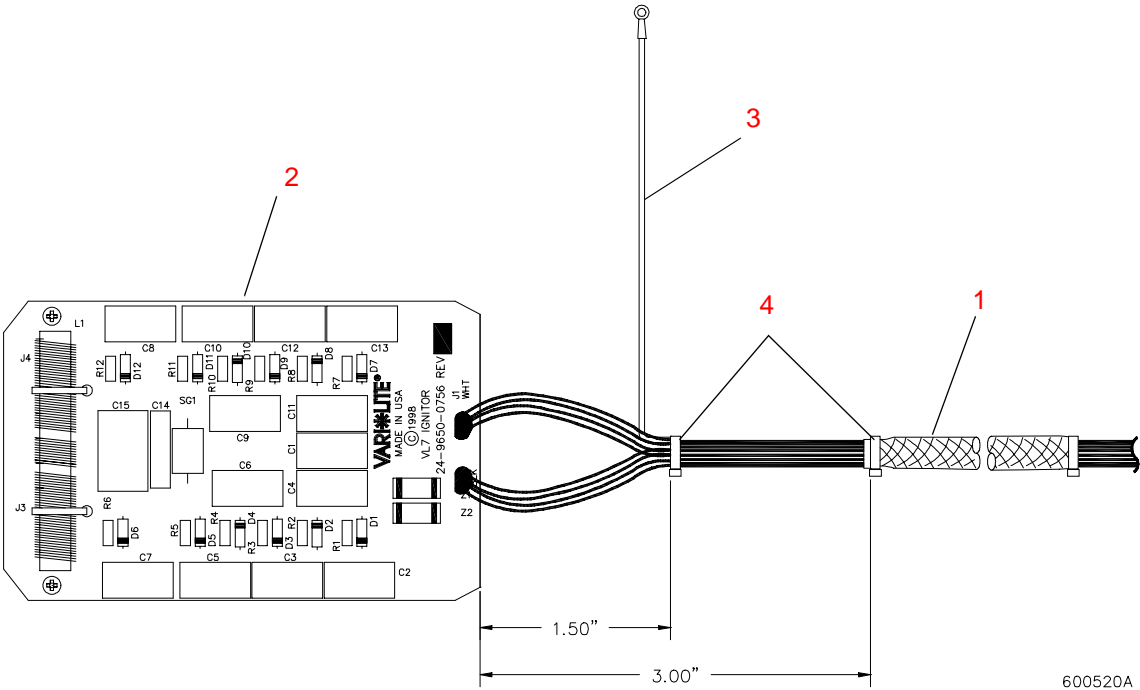


Figure 3-20: VL6B/VL6C Ignitor Board/Cable Assembly

Ignitor Board Assembly VL6B/VL6C

23.9660.0505

Refer to [Figure 3-21](#).

No.	Item	Qty	UM	Description
1	10.9638.0064	1	EA	BRACKET, MOUNTING, IGN6 PCB
2	24.9650.0756	1	EA	PCB ASSY, IGNITOR - VL7
3	25.9660.0501	1	EA	CABLE ASSY, IGNITOR BOARD INPUT VL6/VL6B
4	52.6264.0003	1	EA	CONN HOUSING, 30 SERIES W/FLNGS 3-POS
5	53.2016.0002	2	EA	NUT, 4-40 HEX ZINC
6	53.6596.0001	2	EA	SCREW, 4-40 X 5/16" PPZ
7	53.6613.0375	2	EA	SCREW, 6-32 X 3/8" PPN NYLON

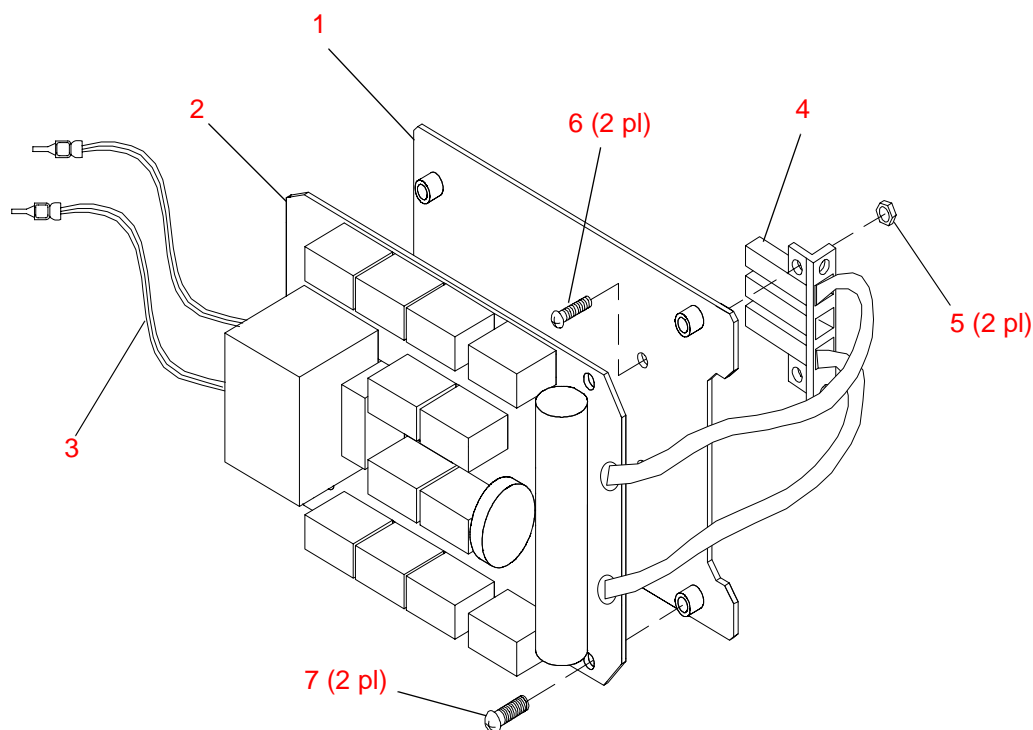


Figure 3-21: VL6B/VL6C Ignitor Board Assembly

Ignitor PCB Assembly VL6

24.9638.0066

Refer to [Figure 3-22](#).

No.	Item	Qty	UM	Description	Ref
1	11.9638.0067	1	EA	PCB, IGNITOR, IGN6	
2	25.9638.0222	1	EA	CABLE ASSY, IGNITOR BOARD OUTPUT	
3	52.6297.0001	1	EA	HEADER, 2 PIN MTA FRCT LOK STRT POST	P1
4	55.2186.0001	2	EA	CABLE TIE, .10" WD 4.00" LG SMALL	
5	60.1422.1002	12	EA	RES, 1/4W 5% 10.0 MEG CF	R1-R12
6	62.3000.0033	13	EA	CAP, .033UF 1000V RAD POLYPRO .600" 10%	C1-C13
7	62.3002.0102	1	EA	CAP, .001UF 15KV, RAD, CERAMIC DISC	C14
8	66.4511.0001	1	EA	RELAY, 30A, 24VDC, 277VAC	K1
9	68.4515.0006	1	EA	COIL, IGNITOR, VL6	L1
10	75.7102.0001	1	EA	SPARK GAP, 2.5KV	SG1
11	82.4311.0818	12	EA	DIODE, MR818 RECTIFIER 1KV 1A	D1-D12
12	82.5310.6304	2	EA	DIODE, Z CLIPPER, 1.5KE180CA 180V 5W	Z1, Z2

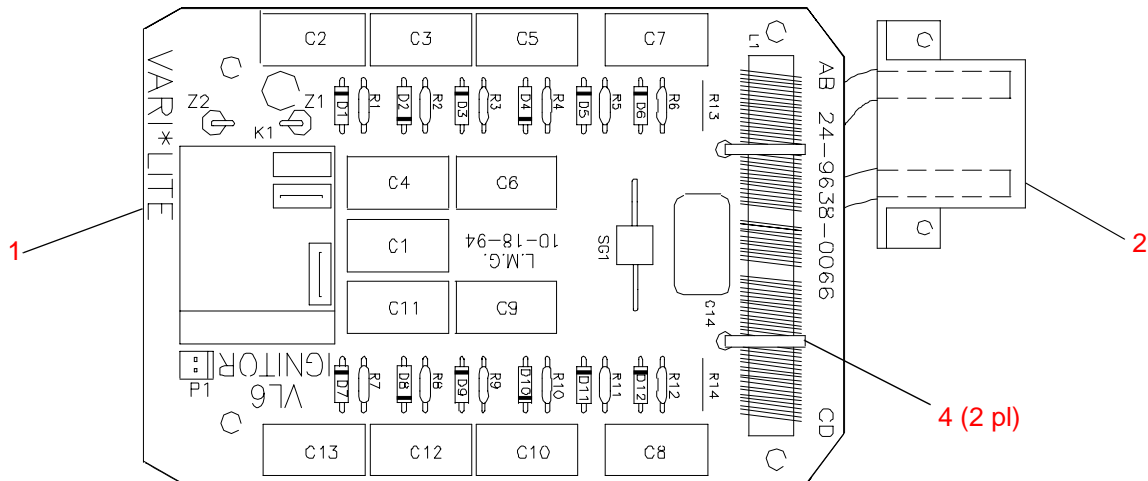


Figure 3-22: VL6 Ignitor PCB Assembly

Ignitor PCB Assembly VL6B/VL6C

24.9650.0756

Refer to [Figure 3-23](#).

No.	Item	Qty	UM	Description	Ref
1	11.9650.0756	1	EA	PCB, IGNITOR -VL7	
2	25.9638.0222	1	EA	CABLE ASSY, IGNITOR BOARD OUTPUT	
3	55.2186.0001	2	EA	CABLE TIE, .10" WD 4" LG SMALL	
4	60.1422.1002	12	EA	RES, 1/4W 5% 10.0 MEG CF	R1-R12
5	62.2032.0001	1	EA	CAP, .01UF, 3000V, RAD, CERAMIC, .375", 20%	C15
6	62.3000.0033	13	EA	CAP, .033UF, 1000V RAD POLYPRO .600" 10%	C1-C13
7	62.3002.0102	1	EA	CAP, .001UF, 15KV, RAD, CERAMIC DISC	C14
8	68.4515.0006	1	EA	COIL, IGNITOR, VL6	L1
9	75.7102.0001	1	EA	SPARK GAP, 2.5KV	SG1
10	82.4311.0818	12	EA	DIODE, MR818 RECTIFIER 1KV 1A	D1-D12
11	82.5310.6304	2	EA	DIODE, Z CLIPPER 1.5KE180CA 180V 5W	Z1, Z2

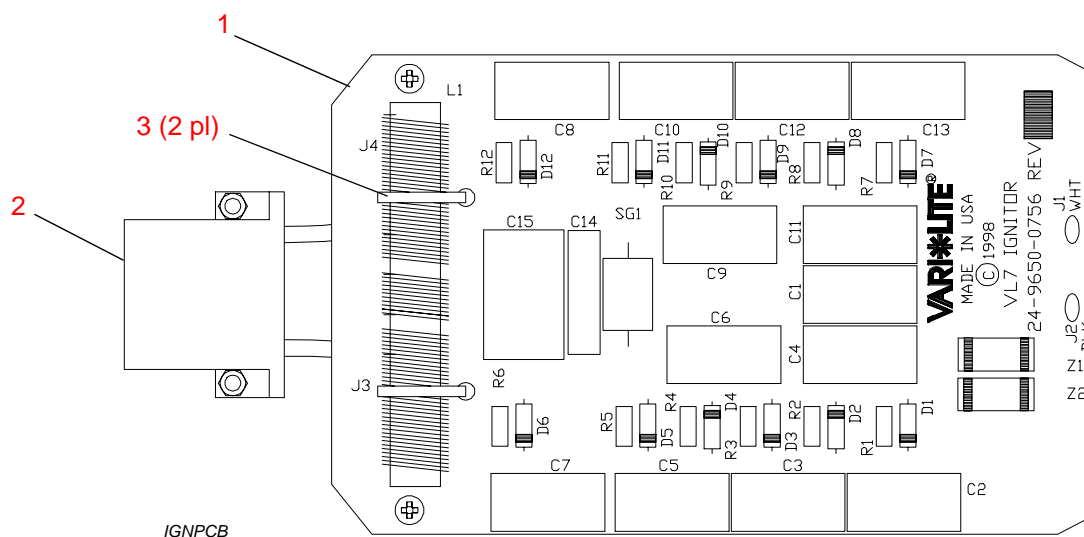


Figure 3-23: VL6B/VL6C Ignitor PCB Assembly

Dimmer Bulkhead Assembly VL6/VL6B/VL6C

22.9638.0082

Refer to [Figure 3-24](#).

No.	Item	Qty	UM	Description
1	10.9621.0069	1	EA	NUT, LOCK, WHEEL SHAFT
2	10.9621.0102	1	EA	COLLET, LOCK, WHEEL SHAFT
3	10.9638.0039	1	EA	BLADE, DIMMER, VL6
4	10.9638.0040	1	EA	BULKHEAD, DIMMER, VL6
5	10.9638.0151	1	EA	STABILIZER, MOTOR, VL6
6	12.9638.0190	1	EA	HEATSINK, DIMMER MOTOR - BLACK ANODIZED
7	12.9638.0196	1	EA	MOTOR, 9 DEG STEPPER FLUID FILLED
8	22.9638.0182	1	EA	ASSEMBLY, DIMMER HEAT SHIELD (VL6/VL6B ONLY)
	22.9674.0185	1	EA	ASSY, UV/DIMMER BULKHEAD (VL6C ONLY)
9	41.9637.0047	1	EA	MIRROR, UV BLOCKER, VL2C AND VL6
10	52.6396.2202	1	EA	RECEPT, 2-POS MTA100 W/POL TAB RED CLSD END
11	52.6396.2403	1	EA	RECEPT, 3-POS MTA100 W/POL TAB 24AWG CSLD END
12	52.6396.2604	1	EA	RECEPT, 4-POS MTA100 W/POL TAB BLUE CLSD END
13	52.6396.2605	1	EA	RECEPT, 5-POS MTA100 W/POL TAB BLUE CLSD END
14	52.6424.0002	1	EA	COVER, 2-POS CLOSED END STRAIN RELIEF - MTA
15	52.6424.0003	1	EA	COVER, 3-POS CLOSED END STRAIN RELIEF - MTA100
16	52.6424.0004	1	EA	COVER, 4-POS CLOSED END STRAIN RELIEF - MTA
17	52.6424.0005	1	EA	COVER, 5-POS CLOSED END STRAIN RELIEF - MTA
18	52.8230.0002	2	EA	TERM, 1/4" FASTON 22-18AWG (VL 1)
19	53.2005.0001	1	EA	NUT, 3/8-32 X 3/32T WHEEL
20	53.2200.0004	2	EA	NUT, 4-40 KEPS SS
21	53.2200.0006	4	EA	NUT, 6-32 KEPS SS
22	53.5506.0750	1	EA	SCREW, 6-32 X 3/4" PPSS
23	53.6525.0001	1	EA	SCREW, 6-32 X 5/16" PPZ
24	53.6536.0001	1	EA	SCREW, 4-40 X 1/2" PFZ (VL1)
25	53.6600.0001	5	EA	SCREW, 4-40 X 5/16" PPB
26	53.6608.0003	2	EA	SCREW, 6-32 X 3/16" LG PPZ (VL1)
27	53.6613.0001	4	EA	SCREW, 6-32 X 1/2" PPZ
28	55.2118.0003	2	EA	WASHER, .750" OD .380" ID .034" THK BELLV SPRN H-CARBON
29	55.2178.0001	1	EA	CABLE ANCHOR MOUNT, #8 SCREW MOUNTING
30	55.2186.0001	1	EA	CABLE TIE, .10" WD 4.00" LG SMALL
31	55.2186.0002	1	EA	CABLE TIE, .09" WD 3.750" LG TEFZEL
32	55.3301.0004	2	EA	WASHER, #4 FLAT SS
33	55.3301.0006	3	EA	WASHER, #6 FLAT SS
34	55.6504.0001	4	EA	WASHER, #6 LOCK EXT TOOTH

No.	Item	Qty	UM	Description
35	55.6579.0005	4	EA	GROMMET, 3/8" HOLE 3/16" ID
36	55.6595.0004	3	EA	SPACER, 3/16 OD X .171L X #4 HOLE ALUM.
37	55.6603.0001	1	EA	SPRING, SS 4.6#/IN. EXTENSION
38	55.6706.0001	1	EA	GROMMET, 9/32" ID 9/16" OD 1/4T SILICONE RED
39	71.2515.0002	1	EA	SOCKET, LED (PNL MOUNT) 12" WIRE
40	73.7029.0001	1.83	FT	WIRE, 22AWG STRND ORANGE
41	74.1034.0001	1	EA	SWITCH, THERMAL, -VL6 DIMMER BULKHEAD
42	86.7002.0003	1	EA	SWITCH, SLOTTED OPTICAL
43	86.7003.0001	1	EA	SENSOR, PHOTO TRANSISTOR SFH300-3 0R -4

Dimmer Bulkhead Assembly VL6/VL6B/VL6C (cont.)

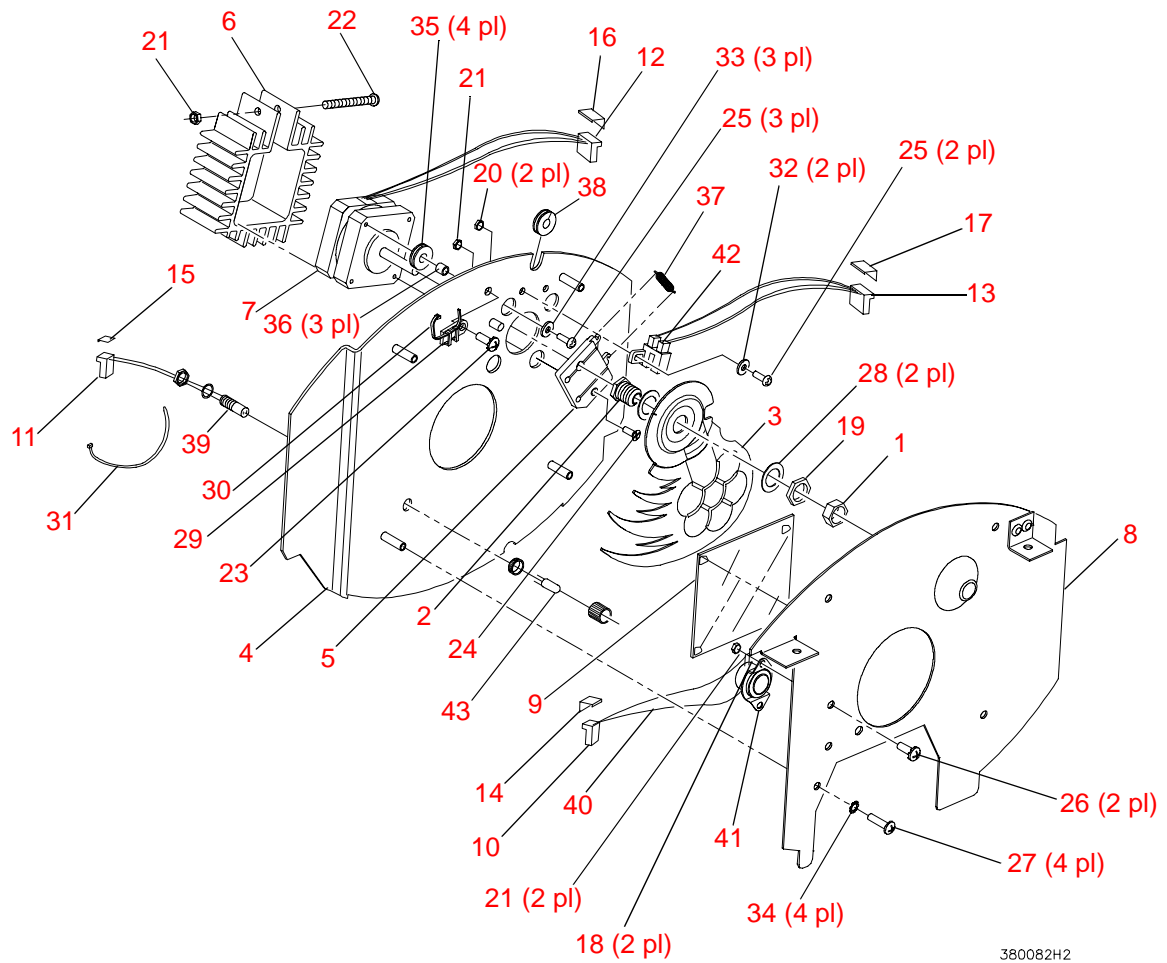


Figure 3-24: Dimmer Bulkhead Assembly

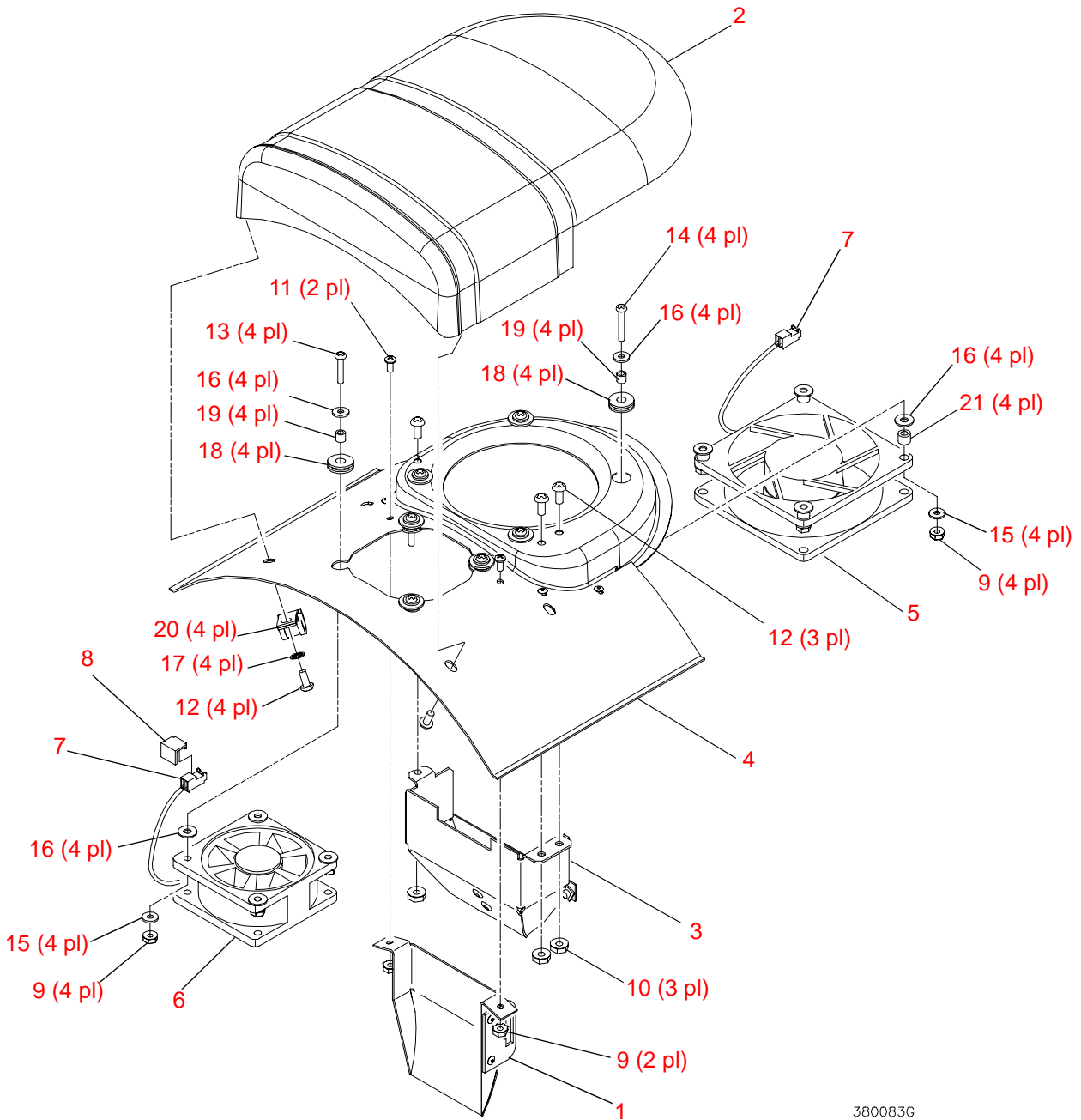
Covers Assembly VL6/VL6B

22.9638.0083

Refer to [Figure 3-25](#).

No.	Item	Qty	UM	Description
1	10.9638.0046	1	EA	DUCT, FAN, SMALL, VL6
2	10.9638.0192	1	EA	BAFFLE COVER, MOLDED, PLASTIC
3	22.9638.0058	1	EA	DUCT ASSY, FAN, LARGE, VL6
4	22.9638.0148	1	EA	COVER ASSY, SLIDING, FAN MOUNT
5	40.7110.0004	1	EA	FAN, F8025M24 -VL6
6	40.7110.0006	1	EA	FAN, VL6, 60MM SQ X 25MM THK 24V HIGH VOLUME
7	52.6396.2202	2	EA	RECEPT, 2-POS MTA100 W/POL TAB RED CLSD END
8	52.6424.0004	1	EA	COVER, 4-POS CLOSED END STRAIN RELIEF - MTA
9	53.2200.0004	10	EA	NUT, 4-40 KEPS SS
10	53.2200.0006	3	EA	NUT, 6-32 KEPS SS
11	53.5604.0250	2	EA	SCREW, 4-40 X 1/4" PPSS BLK
12	53.6525.0001	7	EA	SCREW, 6-32 X 5/16" PPZ
13	53.6537.0001	4	EA	SCREW, 4-40 X 5/8" PPB (VL1)
14	53.6556.0002	4	EA	SCREW, 4-40 X 3/4" PPB
15	55.3301.0004	8	EA	WASHER, #4 FLAT SS
16	55.6517.0001	16	EA	WASHER, .375" OD .150" ID .031" THK FLAT STEEL
17	55.6538.0001	4	EA	WASHER, #6 LOCK INTERNAL TOOTH
18	55.6579.0006	8	EA	GROMMET, 3/8" HOLE 3/16" ID 1/2" OD
19	55.6595.0004	8	EA	SPACER, 3/16 OD X .171L X #4 HOLE ALUM.
20	55.6596.0009	4	EA	CLAMP, CABLE 3/8" SS W/WHITE SILICONE CUSHION
21	55.6659.0001	4	EA	SPACER, 1/4" RND 4 THRU 3/16" AL

Covers Assembly VL6/VL6B (cont.)



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Figure 3-25: VL6/VL6B Covers Assembly

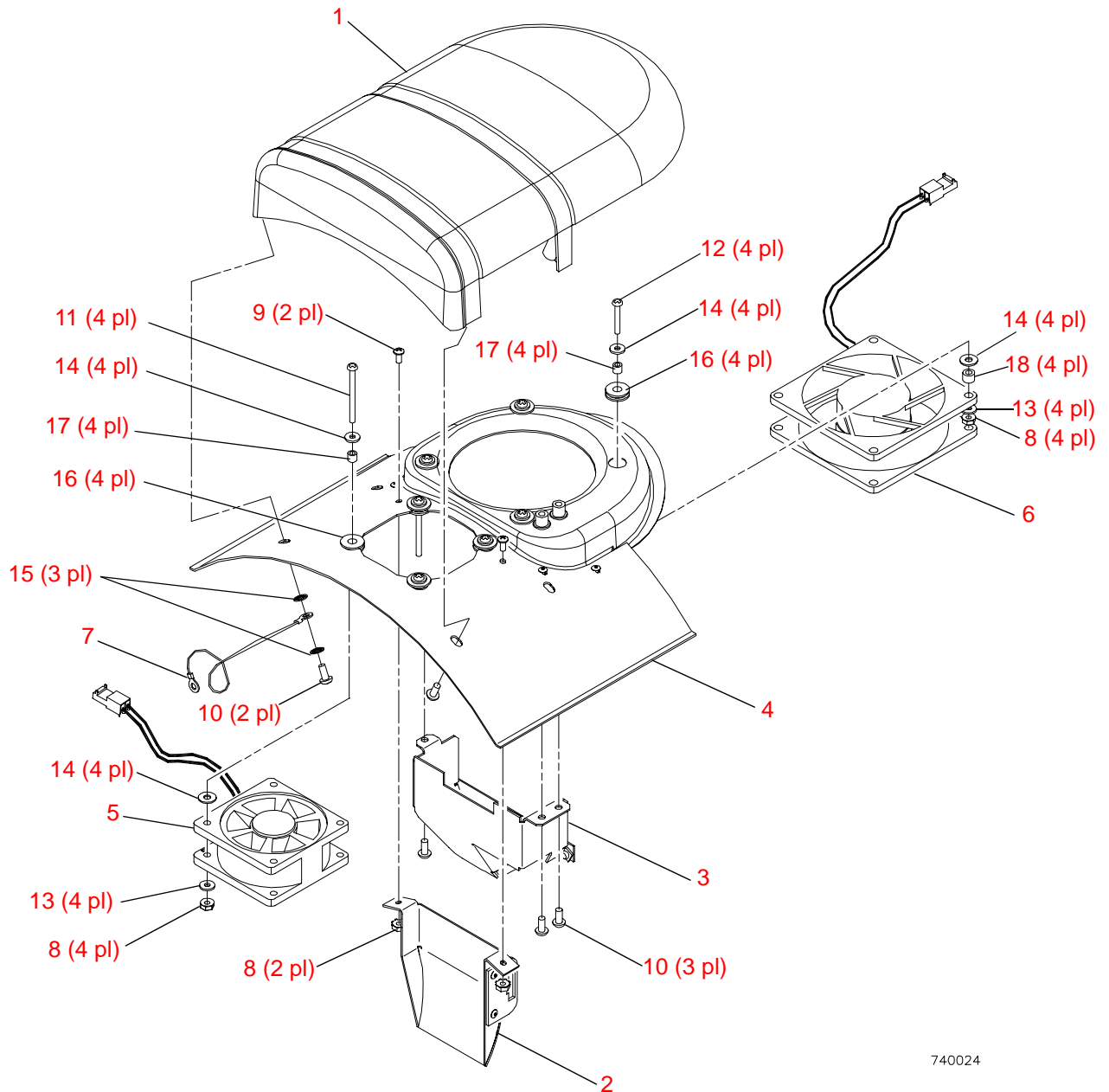
Fan Cover Assembly VL6C

21.9674.0024

Refer to [Figure 3-26](#).

No.	Item	Qty	UM	Description
1	12.9671.0192	1	EA	BAFFLE COVER, MACHINED
2	21.9667.0510	1	EA	ASSY, FAN DUCT
3	21.9671.0058	1	EA	ASSY, LARGE FAN DUCT
4	22.9671.0148	1	EA	COVER ASSY, SLIDING, FAN MOUNT
5	23.9674.0025	1	EA	ELEC ASSY, 60MM FAN
6	23.9674.0026	1	EA	ELEC ASSY, 80MM FAN HIGH SPEED
7	25.8007.2212	1	EA	GND STRAP ASSY, #6 RING #6 RING 3" LG
-	52.8329.0001	2	EA	TERM, RING #6 22-16 AWG NON-INS
-	73.7130.0002	0.33	FT	WIRE, 7/64" TUBULAR BRAID SILVER-PLATED
8	53.2200.0004	10	EA	NUT, 4-40 KEPS SS
9	53.5604.0250	2	EA	SCREW, 4-40 X 1/4" PPSS BLK
10	53.6525.0001	5	EA	SCREW, 6-32 X 5/16" PPZ
11	53.6537.0001	4	EA	SCREW, 4-40 X 5/8" PPB (VL1)
12	53.6556.0002	4	EA	SCREW, 4-40 X 3/4" PPB
13	55.3301.0004	8	EA	WASHER, #4 FLAT SS
14	55.6517.0001	16	EA	WASHER, .375" OD .150" ID .031" THK FLAT STEEL
15	55.6538.0001	3	EA	WASHER, #6 LOCK INTERNAL TOOTH
16	55.6579.0006	8	EA	GROMMET, 3/8" HOLE 3/16" ID 1/2" OD
17	55.6595.0004	8	EA	SPACER, 3/16" OD X .171L X #4 HOLE ALUM.
18	55.6659.0001	4	EA	SPACER, 1/4" RND 4 THRU 3/16" AL

Fan Cover Assembly VL6C (cont.)



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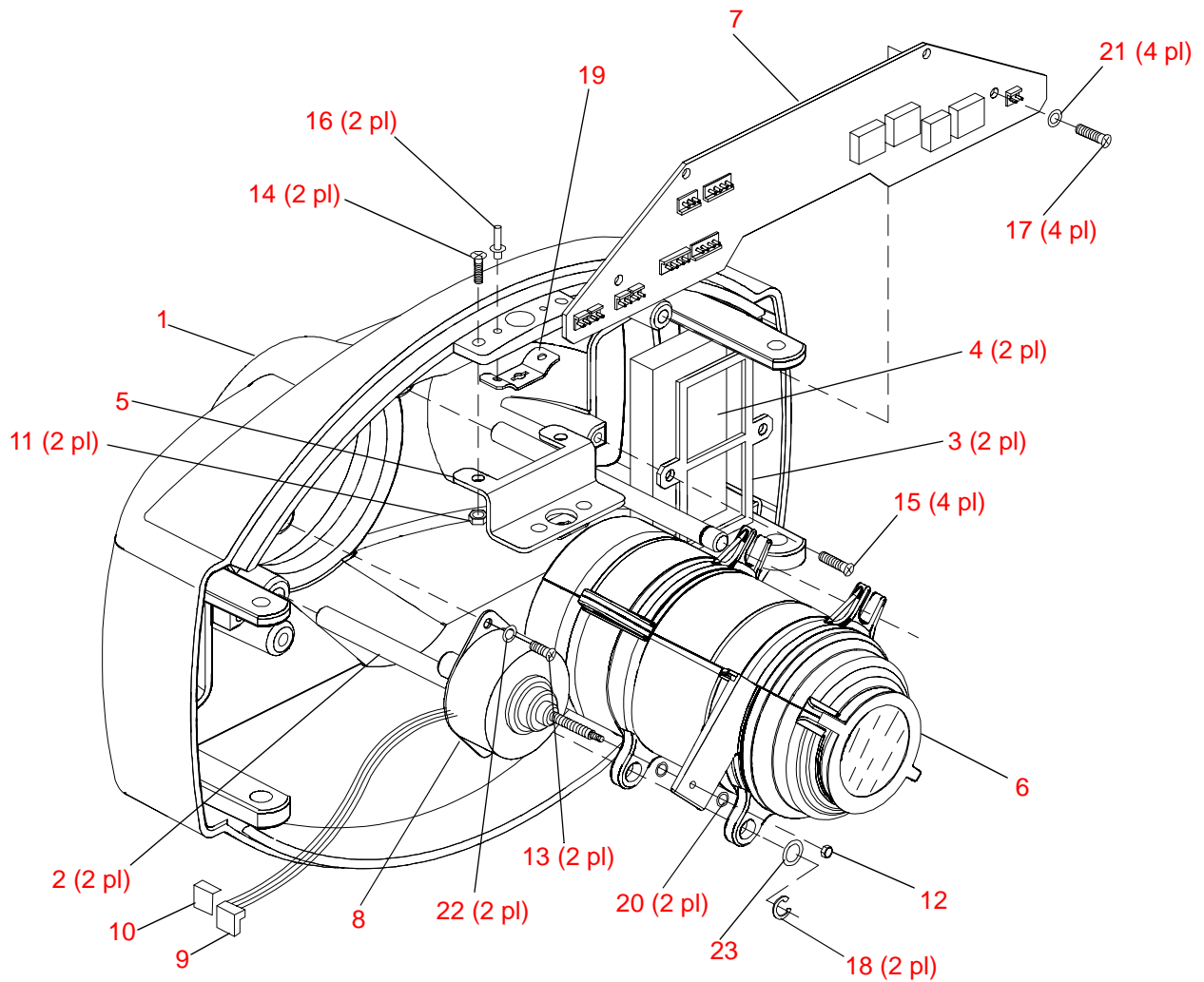
Figure 3-26: VL6C Fan Cover Assembly

Front Assembly VL6

22.9638.0095

Refer to [Figure 3-27](#).

No.	Item	Qty	UM	Description
1	10.9638.0033	1	EA	CASTING, FRONT, VL6
2	10.9638.0062	2	EA	SHAFT, LENS BARREL, VL6
3	10.9638.0093	2	EA	PANEL, VENT COVER, VL6
4	10.9638.0094	2	EA	FILTER, AIR, FRONT CASTING, VL6
5	22.9638.0120	1	EA	BRACKET ASSY, QUARTER TURN
6	22.9638.0081	1	EA	ASSY, NARROW ANGLE LENS (SHOWN)
	22.9638.0167	1	EA	ASSY, WIDE ANGLE LENS
	22.9638.0208	1	EA	ASSY, MEDIUM ANGLE LENS
7	24.9638.0070	1	EA	PCB ASSY, YOKE TERMINATION, YTB6
8	44.9638.0001	1	EA	MOTOR, STEPPER, VL6, HSI 36341
9	52.6396.2604	1	EA	RECEPT, 4-POS MTA100 W/POL TAB BLUE 26AWG
10	52.6424.0004	1	EA	COVER, 4-POS STRAIN RELIEF - MTA
11	53.2200.0006	2	EA	NUT, 6-32 KEPS SS
12	53.2202.0004	1	EA	NUT, 4-40 HEX SS NYLON INSERT
13	53.5504.0250	2	EA	SCREW, 4-40 X 1/4" PPSS
14	53.5636.0625	2	EA	SCREW, 6-32 X 5/8" PFSS BLK
15	53.6525.0003	4	EA	SCREW, 6-32 X 5/16" PPZ THRD CUT TYP F
16	53.6534.0004	2	EA	RIVET, POP, STEEL, 3/32" OD X 3/16" GRIP L
17	53.6596.0001	4	EA	SCREW, 4-40 X 5/16" PPZ
18	54.2007.0001	2	EA	RETAINING RING, EXTERNAL 1/4" SHAFT DIA.
19	55.2233.0001	1	EA	RECEPTACLE, 1/4 TURN (VL4)
20	55.3301.0004	2	EA	WASHER, #4 FLAT
21	55.6512.0004	4	EA	WASHER, #4 SPLIT LOCK SS
22	55.6537.0001	2	EA	WASHER, #4 LOCK INTERNAL TOOTH
23	55.6677.0014	1	EA	WASHER .312 OD .125 ID .040 THK FLAT

Front Assembly VL6 (cont.)**Figure 3-27: VL6 Front Assembly**

Front Assembly VL6B/VL6C

22.9660.0305

Refer to [Figure 3-28](#).

No.	Item	Qty	UM	Description
1	10.9638.0151	1	EA	STABILIZER, MOTOR, VL6
2	10.9660.0129	1	EA	SHAFT STOP, ROTATING GOBO WHEEL -VL6B
3	10.9660.0130	1	EA	SHAFT, ROTATING GOBO WHEEL
4	10.9660.0219	3	EA	SHAFT 1, FOCUS BEARING -VL6B
5	10.9660.0263	2	EA	SUPPORT, LENS -VL6B
6	10.9660.0349	1	EA	SUPPORT RING, OPTICAL -VL6B
7	10.9660.0372	1	EA	SUPPORT BRACKET, EDGE ACTUATOR
8	21.9660.0105	1	EA	ASSY, ROTATING GOBO WHEEL -VL6B
9	21.9660.0339	1	EA	ASSY, MOTOR EDGE -VL6B
10	21.9673.0230	1	EA	ASSY, LENS BARREL -VL6B/VL6C
11	22.9660.0151	1	EA	ASSY, TENSION BRACKET MOTOR WHEEL -VL6B
12	22.9660.0152	1	EA	ASSY, TENSION BRACKET MOTOR INDEX - VL6B
13	22.9660.0358	1	EA	ASSY, FRONT PLATE -VL6B
14	22.9660.0716	1	EA	ASSY, MOUNTING BRACKET COLOR BULKHEAD -VL6B
15	24.9660.0515	1	EA	PCB ASSY, YOKE TERMINATION -VL6B
16	24.9638.0516	1	EA	PCB ASSY, VL6B SENSOR
17	53.2200.0004	1	EA	NUT, 4-40 KEPS SS
18	53.6513.0026	1	EA	SCREW, M3 X .5 X 12MM LG PPSS METRIC
19	53.6520.0001	6	EA	SCREW, 4-40 X 3/8" PPZ
20	53.6545.0004	3	EA	SCREW, 8-32 X 3/8" PPZ
21	53.6559.0001	3	EA	SCREW, 4-40 X 1/4" PFZ
22	53.6608.0003	8	EA	SCREW, 6-32 X 3/16" LG PPZ (VL1)
23	53.6613.0001	8	EA	SCREW, 6-32 X 1/2" PPZ
24	53.6515.0001	2	EA	SCREW, 10-32 X 3/4" SCB
25	54.2029.0001	1	EA	BELT, TIMING MXL .080" PITCH 70 GRV 3/16" WD KEVLAR
26	54.2032.0001	1	EA	BELT, TIMING MXL .080" PITCH 87 GRV 3/16" WD POLY CORD
27	55.2118.0004	1	EA	WASHER, .735" OD .395" ID .011" THK CURVD SPRNG
28	55.2118.0005	1	EA	WASHER, .735" OD .395" ID .016" THK CURVD SPRNG
	55.2179.0003	1	EA	SADDLE, CABLE .75 X .75" 4WAY ADH BACK WHITE (not shown)
	55.2186.0001	3	EA	CABLE TIE, .10" WD 4.00" LG SMALL (not shown)
29	55.3301.0006	4	EA	WASHER, #6 FLAT SS
30	55.3301.0010	2	EA	WASHER, #10 FLAT
31	55.3303.0004	4	EA	WASHER, #4 LOCK INT. TOOTH SS
32	55.6506.0009	1	EA	SPACER, 1/2" RND .125" LG .375" ID SHAFT
33	55.6603.0001	1	EA	SPRING, SS 4.6# / IN. EXTENSION

No.	Item	Qty	UM	Description
34	55.6621.0001	1	EA	WASHER, #4 FLAT ZINC
35	55.6697.0007	2	EA	STANDOFF, 3/16" RND 4-40 .828" LG FF ALUM

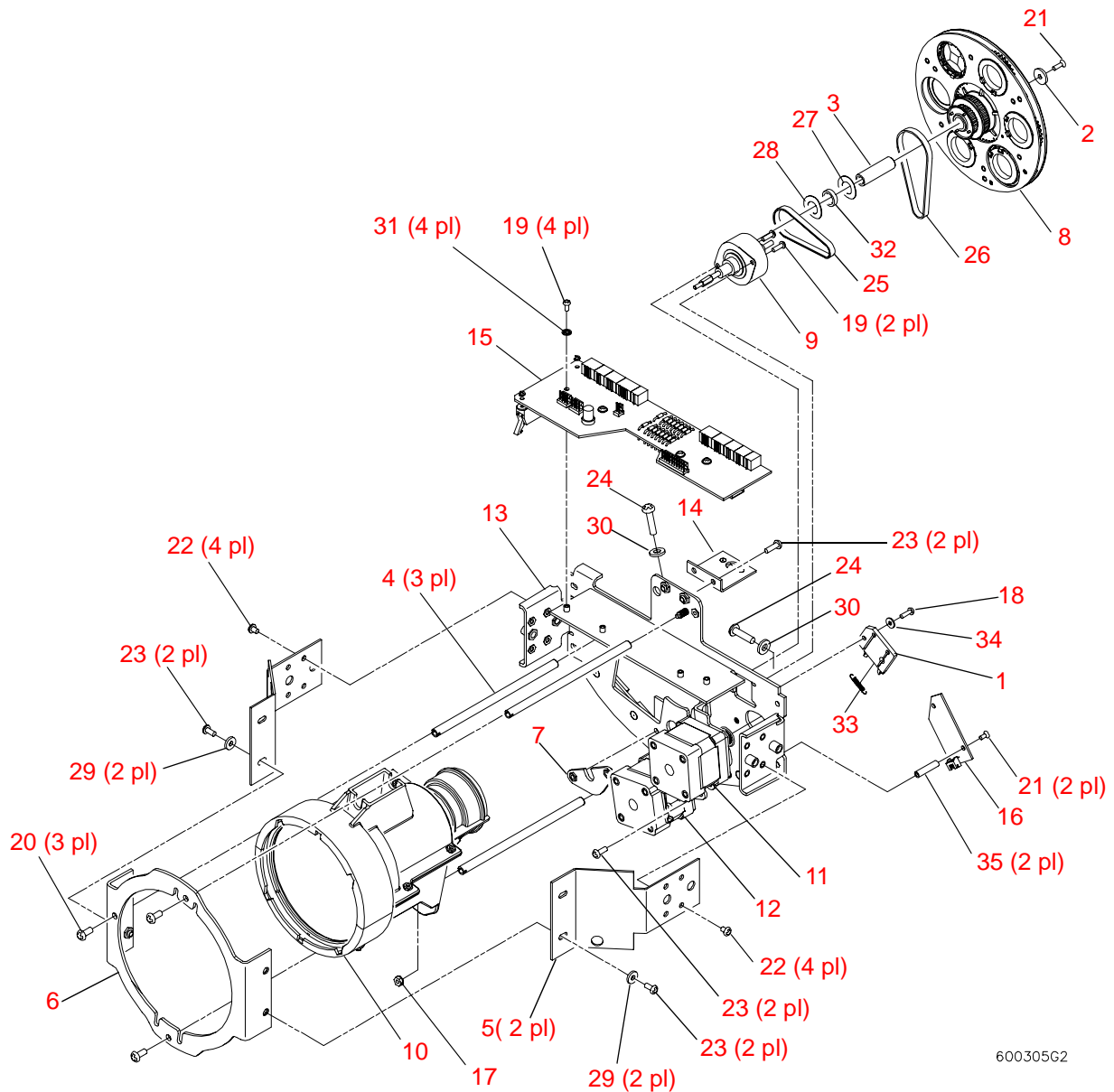


Figure 3-28: VL6B/VL6C Front Assembly

Narrow Angle Lens Assembly VL6

22.9638.0081

Refer to [Figure 3-29](#).

No.	Item	Qty	UM	Description
1	10.9638.0089	1	EA	BARREL #1, LENS
2	10.9638.0152	1	EA	HEATSHIELD, LENS BARREL, VL6 (not shown)
3	10.9638.0203	1	EA	LENS BARREL 2
4	42.9638.0042	1	EA	LENS, VL6 ASPHERIC
5	42.9638.0043	1	EA	LENS, SPHERICAL, COATED, VL6 #2
6	42.9638.0044	1	EA	LENS, SPHERICAL, COATED, VL6 #3
7	42.9638.0045	1	EA	LENS, SPHERICAL, COATED, VL6 #4
8	53.2202.0004	4	EA	NUT, 4-40 HEX SS NYLON INSERT
9	53.6520.0002	4	EA	SCREW, 4-40 X 7/16" PPZ
10	55.3301.0004	8	EA	WASHER, FLAT #4 SS

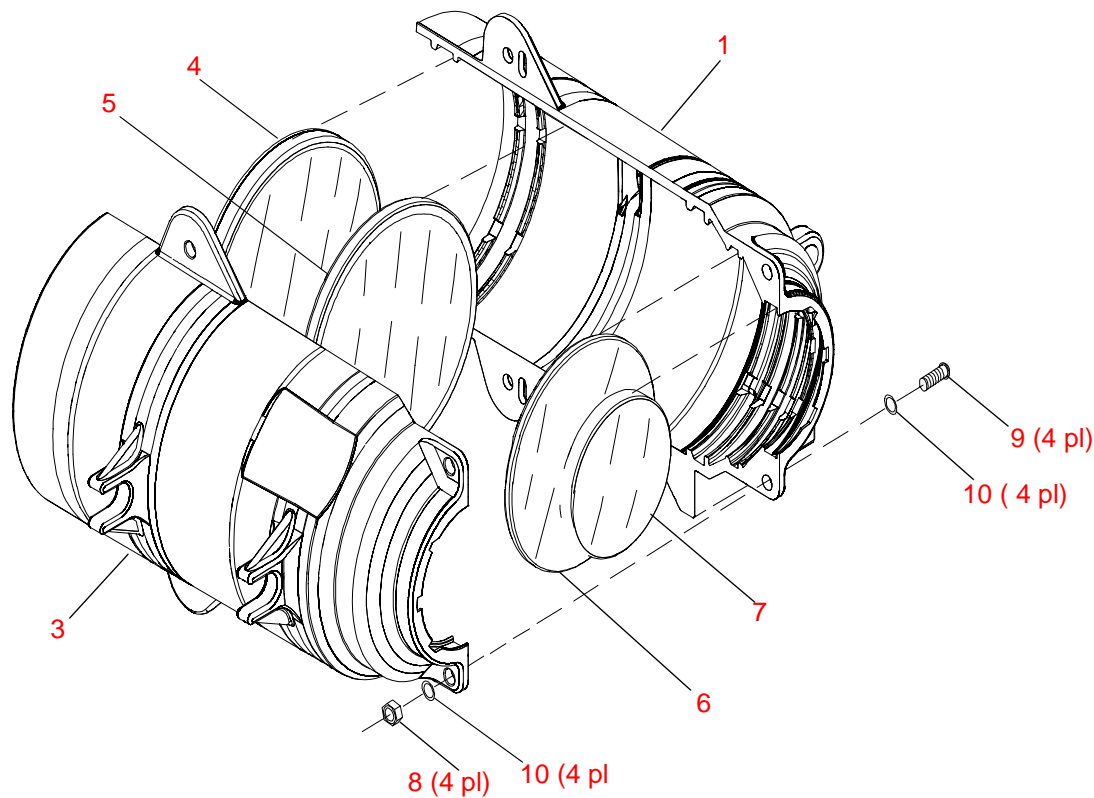


Figure 3-29: VL6 Narrow Angle Lens Assembly

Wide Angle Lens Assembly VL6

22.9638.0167

Refer to [Figure 3-30](#).

No.	Item	Qty	UM	Description
1	10.9638.0169	1	EA	SPACER NO. 1, WIDE ANGLE LENS
2	10.9638.0170	1	EA	SPACER NO. 2, WIDE ANGLE LENS
3	10.9638.0171	1	EA	SPACER NO. 3, WIDE ANGLE LENS
4	10.9638.0172	1	EA	SPACER NO. 4, WIDE ANGLE LENS
5	10.9638.0231	1	EA	CLIP, BARREL FRONT - WIDE ANGLE LENS
6	10.9638.0232	1	EA	CLIP, BARREL REAR - WIDE ANGLE LENS
7	10.9638.0254	1	EA	STOP PIN, WIDE ANGLE LENS BARREL
8	22.9638.0189	1	EA	ASSY, LENS BARREL WELDMENT
9	42.9638.0175	1	EA	LENS, WFOV, SERIES II, # A
10	42.9638.0176	1	EA	LENS, WFOV, SERIES II, # B
11	42.9638.0177	1	EA	LENS, WFOV, SERIES II, # C
12	42.9638.0178	1	EA	LENS, WFOV, SERIES II, # D
13	42.9638.0179	1	EA	LENS, WFOV, SERIES II, # E
14	42.9638.0180	1	EA	LENS, WFOV, SERIES II, # F
15	53.2200.0008	1	EA	NUT, 8-32 KEPS SS
16	55.6525.0003	2	EA	BUSHING, 1/4" ID FLANGED
17	55.7005.0011	1	EA	O-RING, 2.0" OD 1 7/8" ID VITON SIZE 32
18	55.7005.0012	1	EA	O-RING, 1 7/8" OD 1 11/16" ID VITON SIZE 131

Wide Angle Lens Assembly VL6 (cont.)

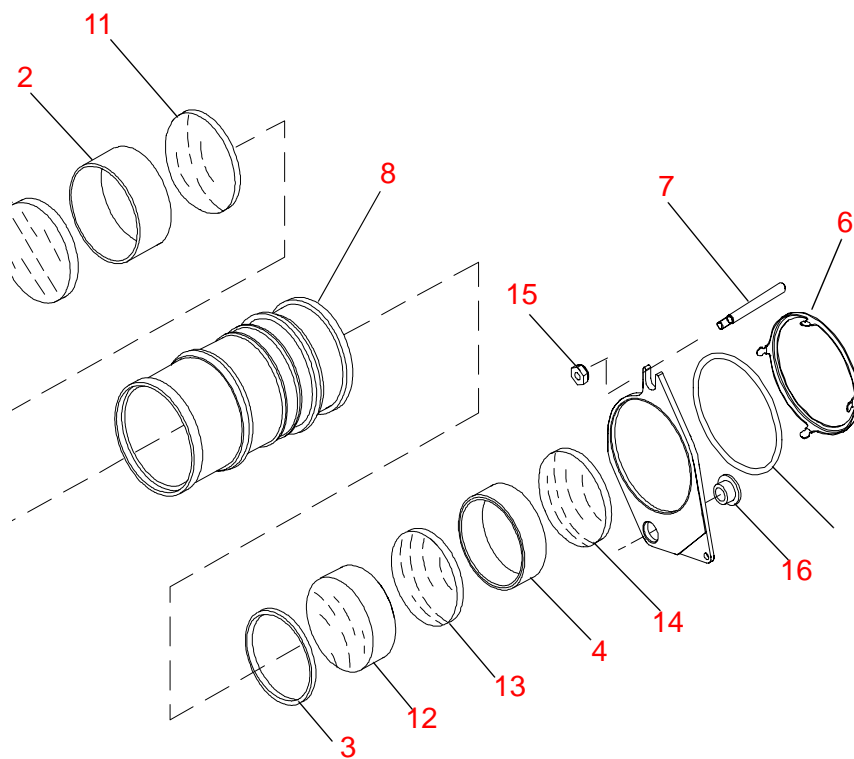


Figure 3-30: VL6 Wide Angle Lens Assembly

Medium Angle Lens Assembly VL6

22.9638.0208

Refer to [Figure 3-31](#).

No.	Item	Qty	UM	Description
1	10.9638.0236	1	EA	RETAINER, MEDIUM ANGLE LENS
2	10.9638.0237	1	EA	O-RING, MEDIUM ANGLE LENS
-	28.9638.0230	1	EA	KIT, MEDIUM ANGLE LENS BARREL
3	10.9638.0204	1	EA	BARREL, MEDIUM ANGLE LENS
4	10.9638.0205	1	EA	SPACER #1, MEDIUM ANGLE LENS
5	10.9638.0206	1	EA	SPACER #2, MEDIUM ANGLE LENS
6	10.9638.0207	1	EA	SPACER #3, MEDIUM ANGLE LENS
7	10.9638.0219	1	EA	STOP PIN, MEDIUM ANGLE LENS BARREL
8	42.9638.0224	1	EA	LENS, "A" MFOV - VL6
9	42.9638.0225	1	EA	LENS, "B" MFOV - VL6
10	42.9638.0226	1	EA	LENS, "C" MFOV - VL6
11	42.9638.0227	1	EA	LENS, "D" MFOV - VL6
12	42.9638.0228	1	EA	LENS, "E" MFOV - VL6
13	53.2200.0008	1	EA	NUT, 8-32 KEPS SS
14	55.6525.0003	2	EA	BUSHING, 1/4" ID FLANGED

Medium Angle Lens Assembly VL6 (cont.)

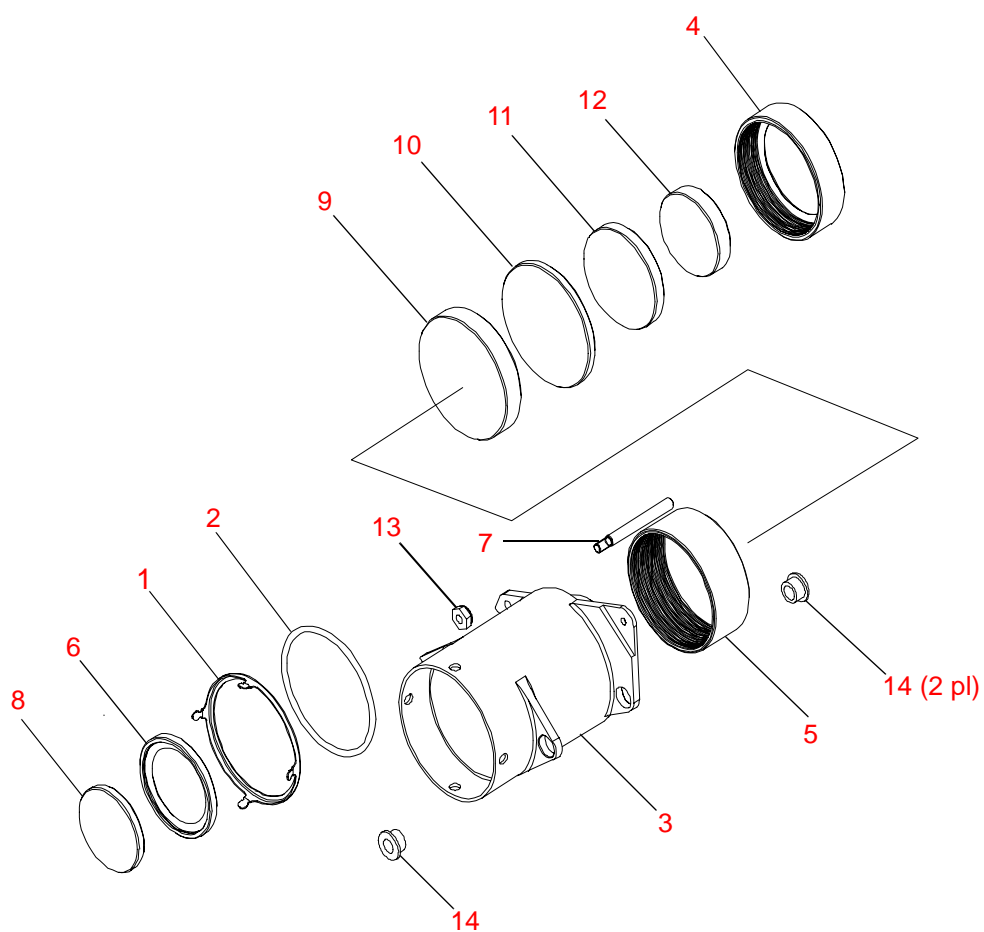


Figure 3-31: VL6 Medium Angle Lens Assembly

Lens Barrel Assembly VL6B/VL6C

21.9673.0230

Refer to [Figure 3-32](#).

No.	Item	Qty	UM	Description
1	10.9660.0237	1	EA	SHAFT, ZOOM -VL6B
2	10.9660.0267	1	EA	BRONZE SLEEVE BEARING, FOCUS -VL6B
3	10.9673.0232	1	EA	MOLDING, BARREL MAIN RIGHT
4	12.9673.0247	1	EA	MACHINED, BARREL MAIN LEFT
5	21.9660.0225	1	EA	ASSY, SUB-BARREL GROUP 1 -VL6B
6	21.9660.0227	1	EA	ASSY, GROUP-3 SUB BARREL -VL6B
7	21.9660.0272	1	EA	ASSY, MOTOR ZOOM OPTICS -VL6B
8	21.9673.0229	1	EA	ASSY, GROUP 2 SUB PANEL
9	42.9660.0026	1	EA	LENS 9, ZOOM OPTICS, VL6B
10	53.2200.0004	6	EA	NUT, 4-40 KEPS SS
11	53.2202.0004	1	EA	NUT, 4-40 HEX SS NYLON INSERT
12	53.5504.0250	2	EA	SCREW, 4-40 X 1/4" PPSS
13	53.5504.0375	4	EA	SCREW, 4-40 X 3/8 " PPSS
14	53.5534.0375	2	EA	SCREW, 4-40 X 3/8" PFSS BLACK
15	55.2249.0002	2	EA	RETAINING RING, GRV DIA .352" EXTERNAL SS
16	55.3301.0004	4	EA	WASHER, #4 FLAT SS
17	55.3301.0006	2	EA	WASHER, #6 FLAT SS

Lens Barrel Assembly VL6B/VL6C (cont.)

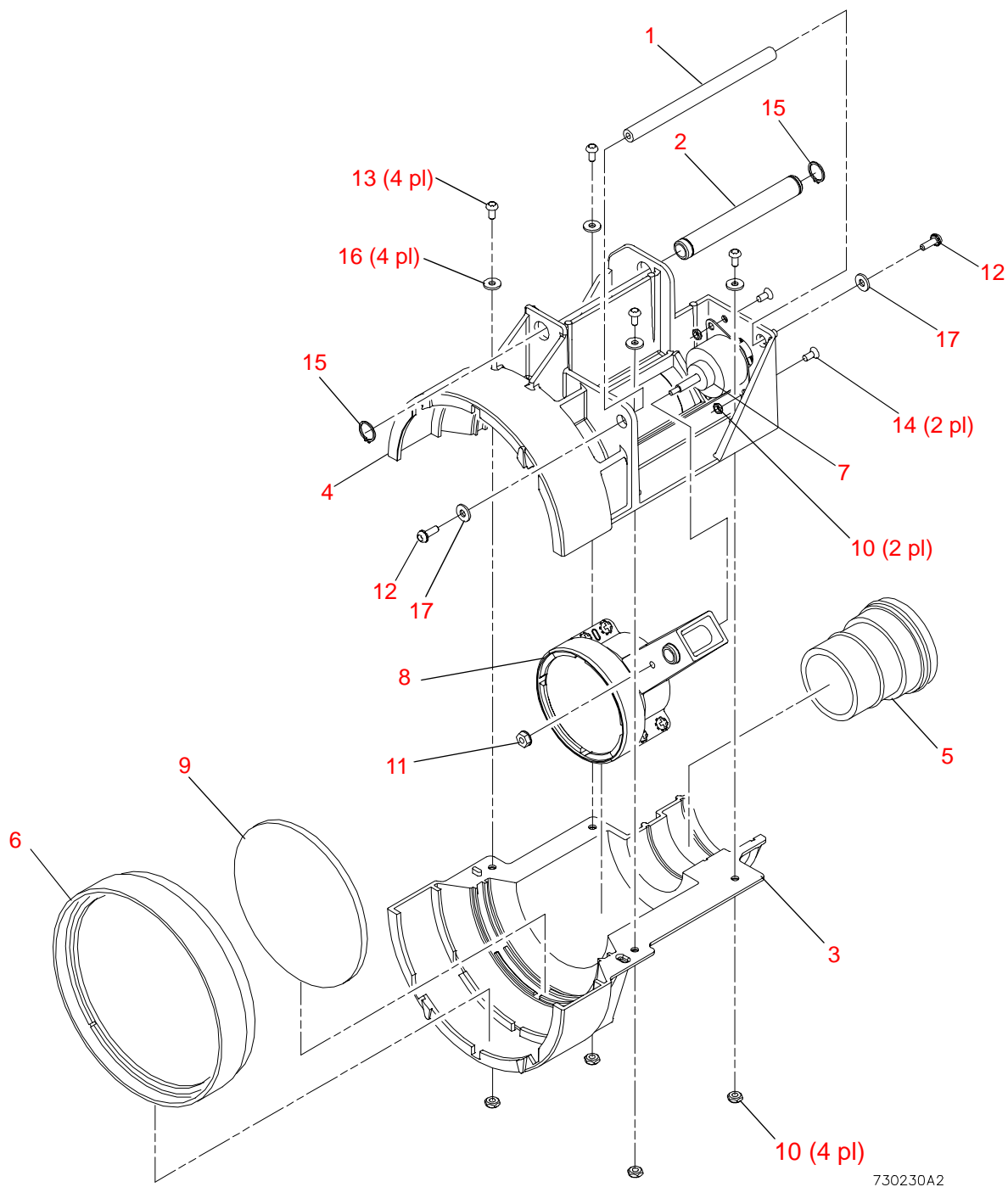


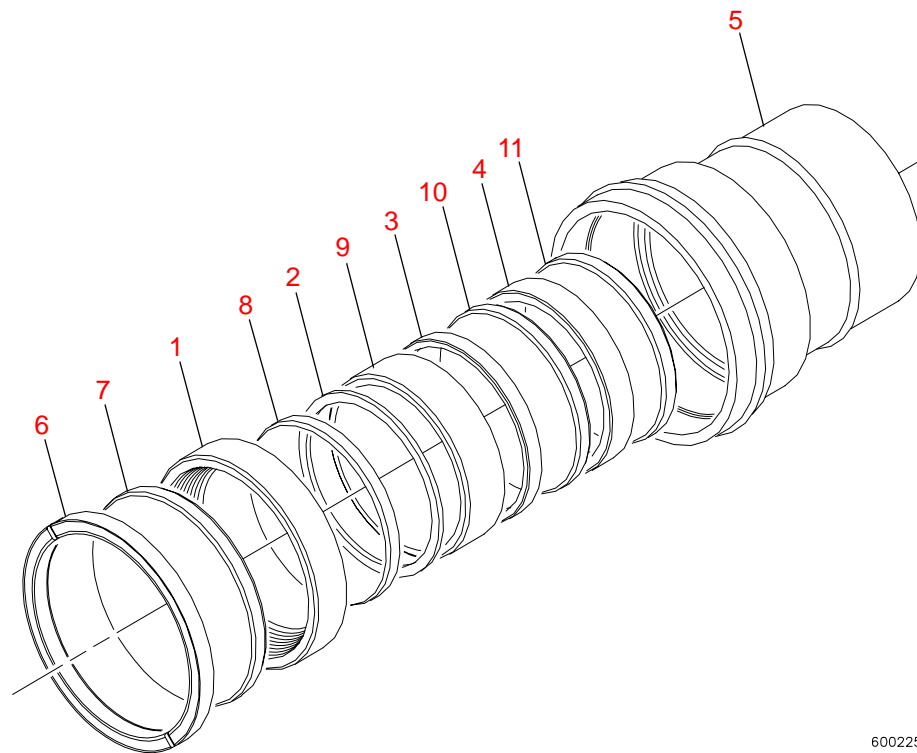
Figure 3-32: VL6B/VL6C Lens Barrel Assembly

Sub-Barrel Group 1 Assembly VL6B/VL6C

21.9660.0225

Refer to [Figure 3-33](#).

No.	Item	Qty	UM	Description
1	10.9660.0211	1	EA	SPACER, LENS 1-2, VL6B
2	10.9660.0212	1	EA	SPACER, LENS 2-3, VL6B
3	10.9660.0213	1	EA	SPACER, LENS 3-4, VL6B
4	10.9660.0215	1	EA	SPACER, LENS 4-5, VL6B
5	10.9660.0216	1	EA	SUB-BARREL, GROUP 1 -VL6B
6	10.9660.0226	1	EA	RETAINER, LENS #1, VL6B
7	42.9660.0018	1	EA	LENS 1, ZOOM OPTICS, VL6B
8	42.9660.0019	1	EA	LENS 2, ZOOM OPTICS, VL6B
9	42.9660.0020	1	EA	LENS 3, ZOOM OPTICS, VL6B
10	42.9660.0029	1	EA	LENS 4, ZOOM OPTICS, VL6B
11	42.9660.0030	1	EA	LENS 5, ZOOM OPTICS, VL6B



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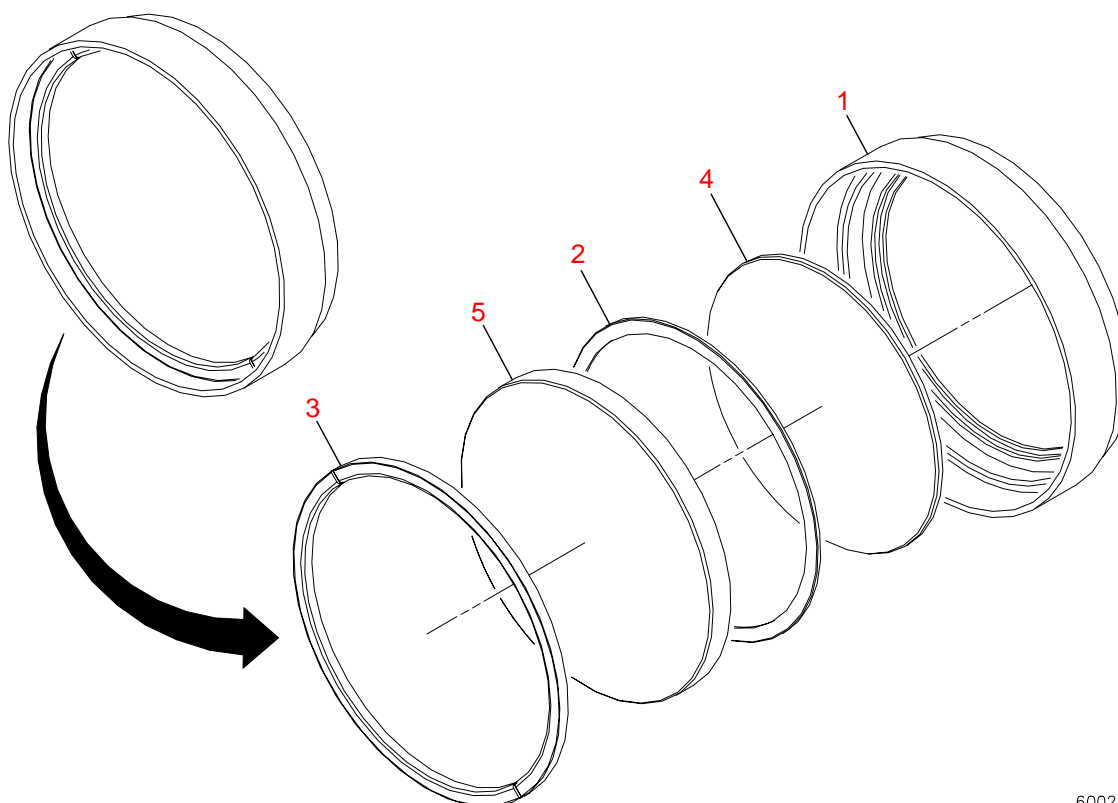
Figure 3-33: VL6B/VL6C Sub-Barrel Group 1 Assembly

Sub-Barrel Group 3 Assembly VL6B/VL6C

21.9660.0227

Refer to [Figure 3-34](#).

No.	Item	Qty	UM	Description
1	10.9660.0217	1	EA	SUB-BARREL, GROUP 3 -VL6B
2	10.9660.0218	1	EA	SPACER, LENS 10-11, VL6B
3	10.9660.0228	1	EA	RETAINER, LENS #11, VL6B
4	42.9660.0027	1	EA	LENS 10, ZOOM OPTICS, VL6B
5	42.9660.0028	1	EA	LENS 11, ZOOM OPTICS, VL6B



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Figure 3-34: VL6B/VL6C Sub-Barrel Group 3 Assembly

Zoom Optic Motor Assembly VL6B/VL6C

21.9660.0272

Refer to [Figure 3-35](#).

No.	Item	Qty	UM	Description
1	44.9660.0262	1	EA	MOTOR, 1" LINEAR - ZOOM
2	52.6396.2804	1	EA	RECEPT, 4-POS MTA100 W/POL TAB GREEN CLSD END
3	52.6424.0004	1	EA	COVER, 4-POS CLOSED END STRAIN RELIEF - MTA

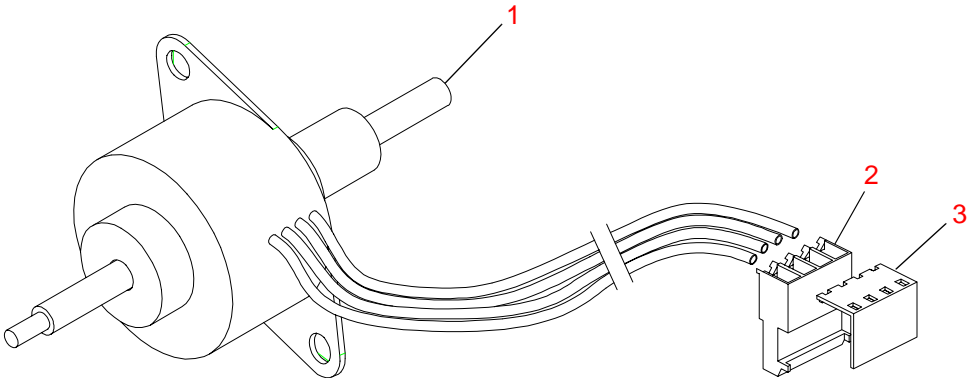


Figure 3-35: VL6B/VL6C Zoom Optics Motor Assembly

Group 2 Sub-Panel Assembly VL6B/VL6C

21.9673.0229

Refer to [Figure 3-36](#).

No.	Item	Qty	UM	Description
1	10.9660.0246	1	EA	SPACER, GROUP 2
2	10.9660.0268	1	EA	BRONZE SLEEVE BEARING, ZOOM
3	10.9673.0223	1	EA	MOLDING BARREL, RIGHT ZOOM
4	12.9673.0224	1	EA	MACHINED, BARREL LEFT ZOOM
5	42.9660.0023	1	EA	LENS 6, ZOOM OPTICS
6	42.9660.0024	1	EA	LENS 7, ZOOM OPTICS
7	42.9660.0025	1	EA	LENS 8, ZOOM OPTICS
8	53.2201.0004	4	EA	NUT, 4-40 HEX SS
9	53.5504.0375	4	EA	SCREW, 4-40 X 3/8" PPSS
10	55.2249.0002	2	EA	RETAINING RING, GRV DIA .352" EXTERNAL SS
11	55.6590.0011	4	EA	WASHER, #4 LOCK EXT TOOTH

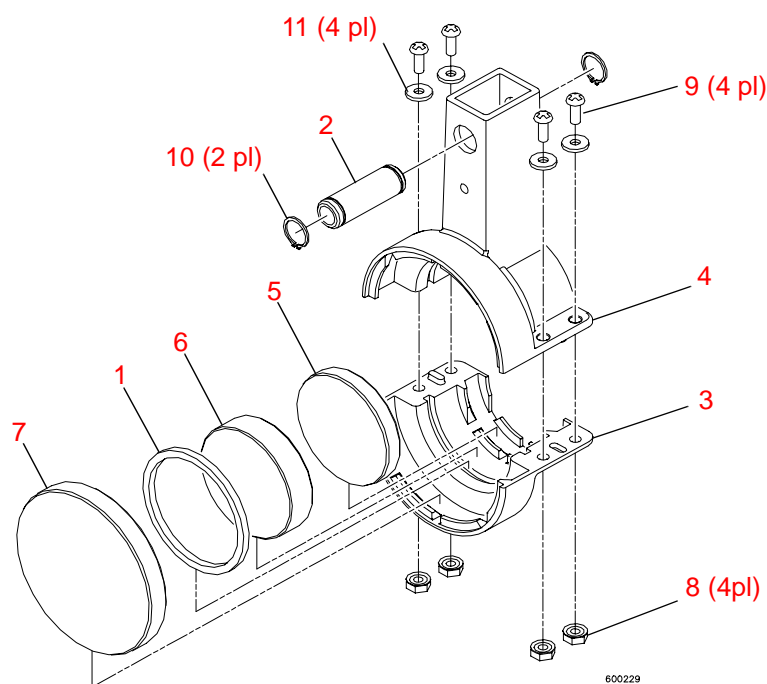


Figure 3-36: VL6B/VL6C Group 2 Sub-Panel Assembly

Yoke Termination PCB Assembly VL6

24.9638.0070

Refer to [Figure 3-37](#).

No.	Item	Qty	UM	Description	Ref
1	06.6042.0002	1	EA	QUIK-DOT MARKER, 1/4" RED	
2	06.6042.0006	1	EA	QUIK-DOT MARKER, 1/4" BLUE	
3	06.6042.0004	1	EA	QUIK-DOT MARKER, 1/4" YELLOW	
4	11.9638.0071	1	EA	PCB, YOKE TERMINATION, YTB6	
5	52.6229.0001	2	EA	HEADER, 3-PIN MTA FRIC LOK STRT POST	P.T, WH1 SENS
6	52.6259.0004	2	EA	HEADER, 4-PIN, MTA100, SHROUDED, R/A	DIM, WH 2
7	52.6284.0001	3	EA	HEADER, 4-PIN, MTA FRCT LOK STRT POST	BEAM, LENS, WH 1
8	52.6297.0001	4	EA	HEADER, 2-PIN, MTA FRCT LOK STRT POST	F1, F2, IGN, T1
9	52.6353.0034	1	EA	CONN, 4-SIDED, 34-POS, SQR. POST, .025	
10	52.6365.0003	1	EA	HEADER, 3-POS, SHROUDED, R/A	WH 2 SENS
11	52.6421.0027	2	EA	LATCH W/O PUSH TABS FOR PIN HEADER ASSY	
12	52.6445.0005	1	EA	HEADER, 5-POS, MTA100, SHROUDED, R/A	DIM EOT
13	53.2009.0001	2	EA	NUT, #2-56	
14	53.6659.0009	2	EA	SCREW, 2-56 X 7/16 PPZ	
15	55.2112.0002	2	EA	WASHER NYLON, .098 ID X .312 OD X .032TH	
16	55.6569.0001	2	EA	WASHER, #2 LOCK	
17	60.1429.3303	1	EA	RES, 1/4W 5% 330 CF	R1
18	82.4317.5819	16	EA	DIODE, RECTIFIER, 1N5819 40V 1A	D1-D16

Yoke Termination PCB Assembly VL6 (cont.)

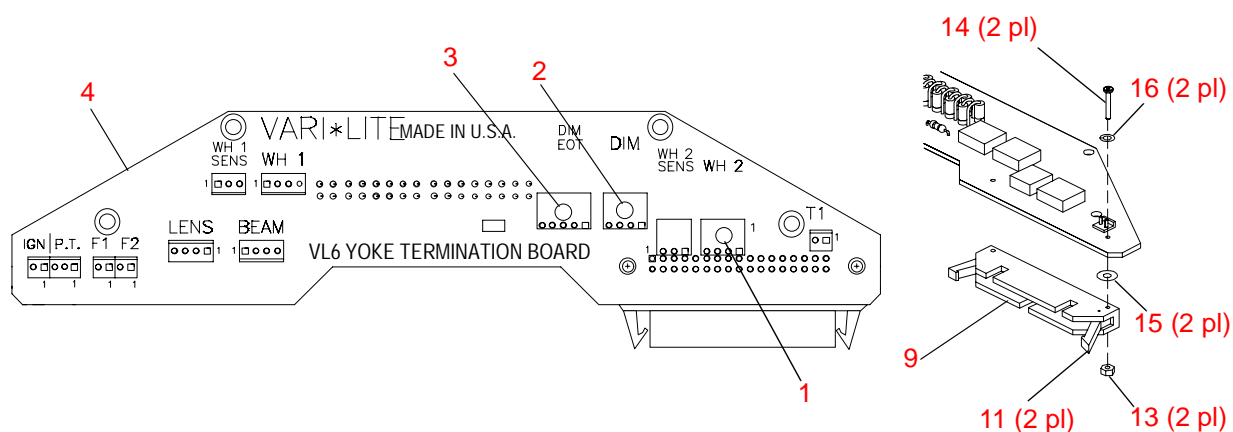


Figure 3-37: VL6 Yoke Termination PCB Assembly

Yoke Termination PCB Assembly VL6B/VL6C

24.9660.0515

Refer to [Figure 3-38](#).

No.	Item	Qty	UM	Description	Ref
1	06.6042.0002	2	EA	QUIK-DOT MARKER, 1/4" RED	XJ9, XJ17
2	06.6042.0004	2	EA	QUIK-DOT MARKER, 1/4" YELLOW	XJ10, XJ14
3	06.6042.0006	2	EA	QUIK-DOT MARKER, 1/4" BLUE	XJ12, XJ15
4	06.6042.0009	2	EA	QUIK-DOT MARKER, 1/4" WHITE	XJ11, XJ16
5	11.9660.0515	1	EA	PCB, YOKE TERMINATION BOARD -VL6B	
6	52.6259.0004	4	EA	HEADER, 4-POS MTA100 SHROUDED RT ANG	J11, J12, J15, J17
7	52.6284.0001	2	EA	HEADER, 4-POS MTA FRCT LOK STRT POST	J2, J3
8	52.6297.0001	1	EA	HEADER, 2-PIN MTA FRCT LOK STRT POST	J6
9	52.6357.0001	1	EA	HEADER, 10-POS MTA FRCT LOK STRT POST	J1
10	52.6365.0002	4	EA	HEADER, 2-POS MTA100 SHROUDED R/A	J4, J5, J8, J13
11	52.6365.0003	3	EA	HEADER, 3-POS SHROUDED RT ANGLE	J9, J10, J16
12	52.6445.0005	1	EA	HEADER, 5-POS MTA100 SHROUDED R/A	J14
13	52.6594.0034	1	EA	HEADER ASSY, 34-POS UNIVERSAL AMP-LATCH	J7
14	60.1429.3303	1	EA	RES, 1/4W 5% 330.0 OHM CF	R1
15	70.3731.0001	1	EA	FUSE, 5AMP, 19374K, TR5-T TIME LAG	F1
16	70.3732.0001	1	EA	FUSEHOLDER, TR5, 19560	XF1
17	82.4317.5819	16	EA	DIODE, 1N5819 RECTIFIER 40V 1A	D1-D16

Yoke Termination PCB Assembly VL6B/VL6C (cont.)

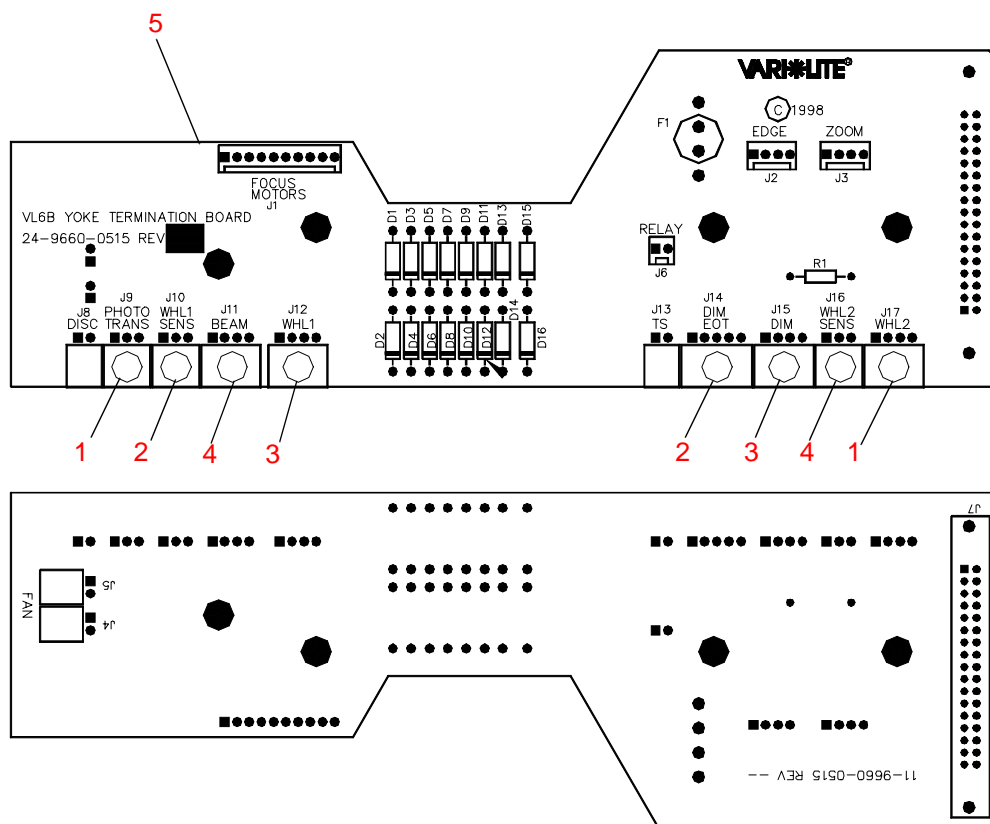


Figure 3-38: VL6B/VL6C Yoke Termination PCB Assembly

Sensor PCB Assembly VL6B/VL6C

24.9638.0516

Refer to [Figure 3-39](#).

No.	Item	Qty	UM	Description	Ref
1	11.9660.0516	1	EA	PCB, SENSOR BOARD -VL6B	
2	52.6507.0004	1	EA	HEADER, 4-POS R/A 2MM SHROUDED	J1
3	86.7005.0001	2	EA	SENSOR, HALL-EFFECT A3141LLT SUR MT	S1, S2

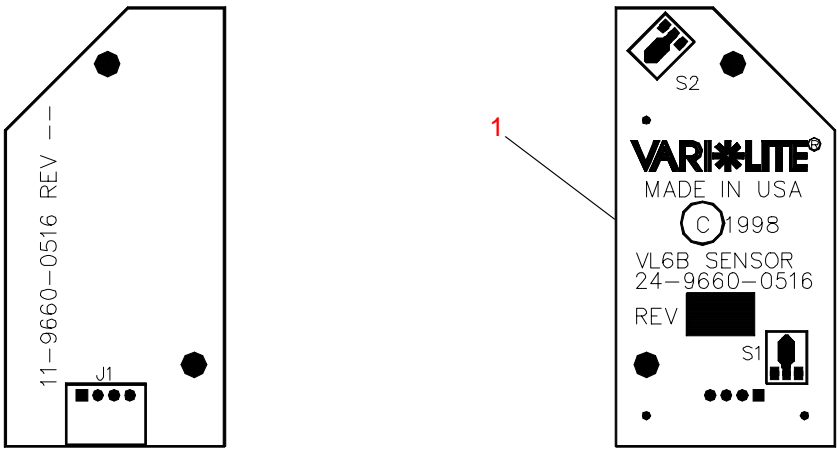


Figure 3-39: VL6B/VL6C Sensor PCB Assembly

Rotating Gobo Wheel Assembly VL6B/VL6C

21.9660.0105

Refer to [Figure 3-40](#).

No.	Item	Qty	UM	Description
1	10.9660.0110	4	EA	GOBO CARRIER, SPINNING GOBO WHEEL, VL6B
2	10.9660.0112	1	EA	SUN GEAR, SPINNING GOBO WHEEL, VL6B
3	10.9660.0144	1	EA	SPRING GOBO RETAINER, SPINNING GOBO WHEEL, VL6B
4	10.9660.0153	1	EA	MAGNET, HALL EFFECT SENSOR .07ID -VL6B
5	10.9667.0333	1	EA	MOUNTING PLATE, FRONT (ROTATING GOBO WHEEL)
6	10.9667.0334	1	EA	MOUNTING PLATE, AFT (ROTATING GOBO WHEEL)
7	10.9667.0335	1	EA	LIGHT SHIELD, SPINNING GOBO WHEEL
8	21.9660.0102	1	EA	ASSY, SENSOR PLANET GEAR -VL6B
9	21.9660.0147	1	EA	ASSY, DRIVE HUB/PULLEY FLANGE, SPINNING GOBO WHEEL
10	41.6016.4305	1	EA	GOBO, PINWHEEL
11	41.6016.4316	1	EA	ASSY, VL6B SPINNING GOBO HYPNOSPIRAL
12	41.6016.6011	1	EA	ASSY, VL6B SPINNING GOBO CIRCLE OF OVALS
13	41.6016.6990	1	EA	ASSY, VL6B SPINNING GOBO SPIRAL STONES
14	41.6016.8005	1	EA	GAG, 5 FACET PRISM, VL6B ROTATING GOBO WHEEL
15	53.6597.0001	9	EA	SCREW, 4-40 X 3/16" PPZ
16	53.6633.0002	2	EA	SCREW, #4 X 3/8" PFZ SHT METAL

Rotating Gobo Wheel Assembly VL6B/VL6C (cont.)

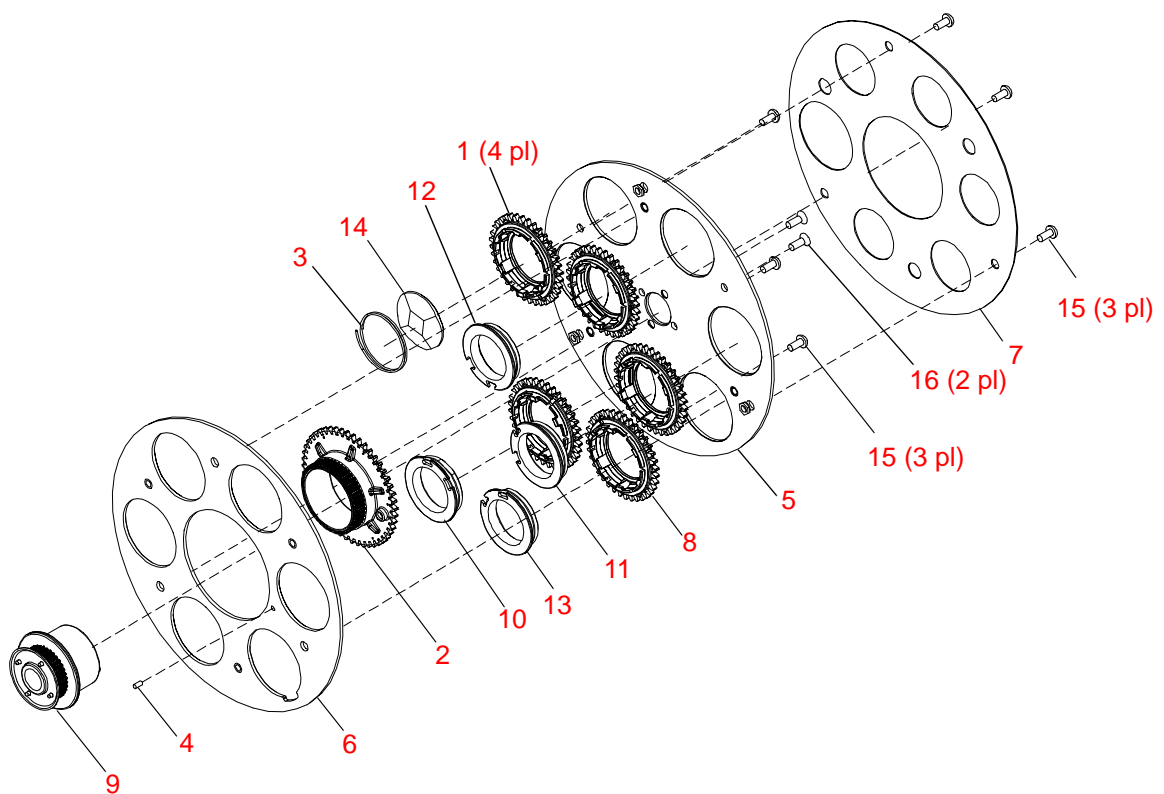


Figure 3-40: VL6B/VL6C Rotating Gobo Wheel Assembly

Edge Motor Assembly VL6B/VL6C

21.9660.0339

Refer to [Figure 3-41](#).

No.	Item	Qty	UM	Description
1	44.9660.0262	1	EA	MOTOR, 1.4" LINEAR -VL6B FOCUS
2	52.6396.2804	1	EA	RECEPT, 4-POS MTA100 W/POL TAB GREEN CLSD END
3	52.6424.0004	1	EA	COVER, 4-POS CLOSED END STRAIN RELIEF - MTA

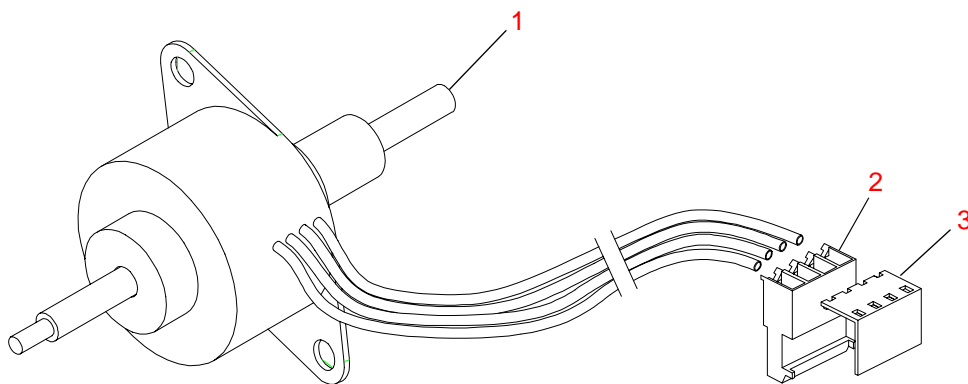


Figure 3-41: VL6B/VL6C Edge Motor Assembly

Yoke

Yoke Assembly VL6

22.9638.0085

Refer to [Figure 3-42](#).

No.	Item	Qty	UM	Description
1	06.6018.0001	0.42	FT	VELCRO LOOP, 5/8"BLK ADHESIVE BACKED
2	10.9628.0211	2	EA	STABILIZER, PAN/TILT
3	10.9634.0095	2	EA	HEAT SHIELD, YOKE LEG
4	10.9634.0096	1	EA	HEAT SHIELD, YOKE CROSS MEMBER
5	10.9634.0111	1	EA	YOKE BOTTOM CROSS MEMBER, VL5
6	10.9634.0113	1	EA	YOKE LEG, VL5 BOARD SIDE
7	10.9634.0114	1	EA	LINER, PAN TUBE
8	10.9634.0149	1	EA	CAP, TILT TUBE, VL5
9	10.9634.0153	2	EA	BRACKET, VL5 YOKE COVER
10	10.9634.0155	1	EA	TUBE, VL5 PIGTAIL PAN
11	10.9634.0171	2	EA	PULLEY, PTA DRIVEN
12	10.9634.0174	2	EA	COLLET, PTA DRIVEN PULLEY
13	10.9634.0175	1	EA	RING, PAN STOP
14	22.9634.0110	1	EA	CROSS MEMBER ASSY, YOKE
15	22.9634.0112	1	EA	YOKE LEG, VL5 TILT SIDE
16	22.9638.0059.01	2	EA	ASSY, PAN/TILT MECHANISM,VL6 J06 ENCODER
17	24.9638.0009.01	1	EA	PCB ASSY, VL6 LAMP CONTROL BD W/EPROM
18	25.9634.0180	1	EA	CABLE ASSY, VL5 INPUT W/GRN-YEL
19	25.9638.0243	1	EA	CABLE ASSY, GROUND
20	25.9643.0017	1	EA	CABLE ASSY, VLM/VL6 TILT
21	25.9643.0018	1	EA	CABLE ASSY, VLM/VL6 PAN
22	52.8295.0002	1	EA	TERMINAL STRIP, 300V 12AWG 20A 2-POS.
23	53.2002.0001	4	EA	NUT, 6-32 KEP ZINC PLATED
24	53.2002.0003	1	EA	NUT, 6-32 HEX ZINC NYLON INSERT
25	53.2002.0004	8	EA	NUT, 6-32 ACORN THREADLOCKING SS
26	53.2003.0001	4	EA	NUT, 4-40 KEP ZINC PLATED
27	53.5508.0375	16	EA	SCREW, 8-32 X 3/8" PPSS
28	53.5536.0375	1	EA	SCREW, 6-32 X 3/8" PFSS
29	53.5638.0375	12	EA	SCREW, 8-32 X 3/8" LG PFSS BLK
30	53.5710.0100	1	EA	SCREW, 10-32 X 1" SCSS
31	53.6506.0001	4	EA	BEARING, TORQUE TUBE, 2.6250 OD X 2.0620 ID
32	53.6514.0002	1	EA	SCREW, 10-32 X 1-1/4" SCZ
33	53.6525.0001	18	EA	SCREW, 6-32 X 5/16" PPZ

No.	Item	Qty	UM	Description
34	53.6526.0001	2	EA	SCREW, 6-32 X 5/8" PPZ
35	53.6616.0001	1	EA	SCREW, 6-32 X 3/4" PPZ
36	54.1205.0001	1	EA	RING, RETAINING 1.963" ID
37	54.1206.0001	4	EA	RING, RETAINING 2.521" ID
38	55.2129.0002	1	EA	SHIM, STAINLESS STEEL PAN TUBE
39	55.2177.0001	2	EA	CABLE ANCHOR MOUNT, BLACK
40	55.2178.0001	2	EA	CABLE ANCHOR MOUNT, #8 SCREW MOUNTING
41	55.2186.0001	4	EA	CABLE TIE, .10" WD 4.00" LG SMALL
42	55.2201.0001	4	EA	SCREW, 4-40 X 5/16" PFB
43	55.3301.0010	2	EA	WASHER, #10 FLAT
44	55.6507.0003	0.50	FT	WEATHER STRIP, 1/8" X 1" X 50' ADHESIVE BACK
	55.6510.0001	0.50	FT	GROMMET, .032-.052 THK .052 ID (not shown)
45	55.6517.0001	6	EA	WASHER, .375" OD .150" ID .031" THK FLAT STEEL
46	55.6538.0001	12	EA	WASHER, #6 LOCK INTERNAL TOOTH
47	55.6579.0008	1	EA	GROMMET, 3/8" HOLE 5/16" ID 3/8" THK MATL
48	55.6603.0001	2	EA	SPRING, SS 4.6# / IN. EXTENSION
49	67.4008.0001	1	EA	BEAD, EMI .748 I.D.

Yoke Assembly VL6B/VL6C

21.9660.0401

Refer to [Figure 3-43](#).

No.	Item	Qty	UM	Description
1	06.6018.0001	0.50	FT	VELCRO LOOP, 5/8" BLK ADHESIVE BACKED
2	10.9628.0211	2	EA	STABILIZER, PAN/TILT
3	10.9634.0095	2	EA	HEAT SHIELD, YOKE LEG
4	10.9634.0096	1	EA	HEAT SHIELD, YOKE CROSS MEMBER
5	10.9634.0111	1	EA	YOKE BOTTOM CROSS MEMBER, VL5
6	10.9634.0113	1	EA	YOKE LEG, VL5 BOARD SIDE
7	10.9634.0114	1	EA	LINER, PAN TUBE
8	10.9634.0149	1	EA	CAP, TILT TUBE, VL5
9	10.9634.0153	2	EA	BRACKET, VL5 YOKE COVER
10	10.9634.0155	1	EA	TUBE, VL5 PIGTAIL PAN
11	10.9634.0171	2	EA	PULLEY, PTA DRIVEN
12	10.9634.0174	2	EA	COLLET, PTA DRIVEN PULLEY
13	10.9634.0175	1	EA	RING, PAN STOP
14	10.9647.0123	1	EA	BOTTOM RELAY ADAPTER PLATE VL5ARC & VL6
15	10.9647.0131	1	EA	TOP RELAY ADAPTER PLATE VL5ARC & VL6
16	12.9660.0519	1	EA	SLEEVING, IGNITOR/GROUND CABLES -VL6B
17	22.9634.0110	1	EA	CROSS MEMBER ASSY, YOKE
18	22.9634.0112	1	EA	YOKE LEG, VL5 TILT SIDE
19	22.9638.0059.01	2	EA	ASSY, PAN/TILT MECHANISM, VL6 J06 ENCODER
20	23.9650.3327	1	EA	ELEC ASSY, RELAY
21	24.9638.0009.01	1	EA	PCB ASSY, VL6 LAMP CONTROL BD W/EPROM
22	24.9660.0500	1	EA	PCB ASSY, VL6B CONTROLLER
23	25.9638.0243	1	EA	CABLE ASSY, GROUND
24	25.9643.0017	1	EA	CABLE ASSY, VLM/VL6 TILT
25	25.9643.0018	1	EA	CABLE ASSY, VLM/VL6 PAN
26	25.9647.0128	1	EA	VL5A INPUT CABLE ASSEMBLY GRN-YEL
27	25.9660.0512	1	EA	CABLE ASSY, VL6B COMM
28	25.9660.0513	1	EA	CABLE ASSY, VL6B MOTOR HARNESS
	52.6424.0002	1	EA	COVER, 2-POS CLOSED END STRAIN RELIEF - MTA (not shown)
29	53.2002.0001	4	EA	NUT, 6-32 KEP ZINC PLATED
30	53.2002.0003	1	EA	NUT, 6-32 HEX ZINC NYLON INSERT
31	53.2002.0004	8	EA	NUT, 6-32 ACORN THREADLOCKING SS
32	53.2003.0001	4	EA	NUT, 4-40 KEP ZINC PLATED
33	53.2200.0006	4	EA	NUT, 6-32KEPS SS
34	53.5508.0375	16	EA	SCREW, 8-32 X 3/8" PPSS

No.	Item	Qty	UM	Description
35	53.5536.0375	1	EA	SCREW, 6-32 X 3/8" PFSS
36	53.5638.0375	12	EA	SCREW, 8-32 X 3/8" PFSS BLK
37	53.5710.0100	1	EA	SCREW, 10-32 X 1" SCSS
38	53.6506.0001	4	EA	BEARING, TORQUE TUBE, 2.6250 OD X 2.0620 ID
39	53.6514.0002	1	EA	SCREW, 10-32 X 1-1/4" SCZ
40	53.6525.0001	20	EA	SCREW, 6-32 X 5/16" PPZ
41	53.6526.0001	4	EA	SCREW, 6-32 X 5/8" PPZ
42	53.6558.0001	2	EA	SCREW, 6-32X3/8" PPZ
43	54.1205.0001	1	EA	RING, RETAINING 1.963" ID
44	54.1206.0001	4	EA	RING, RETAINING 2.521" ID
45	55.2129.0002	1	EA	SHIM, STAINLESS STEEL PAN TUBE
46	55.2149.0001	4	EA	STANDOFF, 1/4" HEX 6-32 X 3/8" M/F
47	55.2177.0001	2	EA	CABLE ANCHOR MOUNT, BLACK
48	55.2178.0001	2	EA	CABLE ANCHOR MOUNT, #8 SCREW MOUNTING
49	55.2186.0001	4	EA	CABLE TIE, .10" WD 4.00" LG SMALL
50	55.2201.0001	4	EA	SCREW, 4-40 X 5/16" PFB
51	55.3301.0010	2	EA	WASHER, #10 FLAT
52	55.3303.0006	4	EA	WASHER, #6 LOCK INT. TOOTH SS
53	55.6507.0003	0.50	FT	WEATHER STRIP, 1/8" X 1" X 50' ADHESIVE BACK
	55.6510.0001	0.50	FT	GROMMET, .032-.052 THK .052 ID (not shown)
54	55.6517.0001	6	EA	WASHER, .375" OD .150" ID .031" THK FLAT STEEL
55	55.6538.0001	12	EA	WASHER, #6 LOCK INTERNAL TOOTH
56	55.6568.0046	2	EA	SPRING, EXTSN .120" OD .50 LG .020" WIRE DIA SS
57	55.6579.0008	1	EA	GROMMET, 3/8" HOLE 5/16" ID 3/8" THK MATL
58	67.4008.0001	1	EA	BEAD, EMI .748 I.D.

Yoke Assembly VL6B/VL6C (cont.)

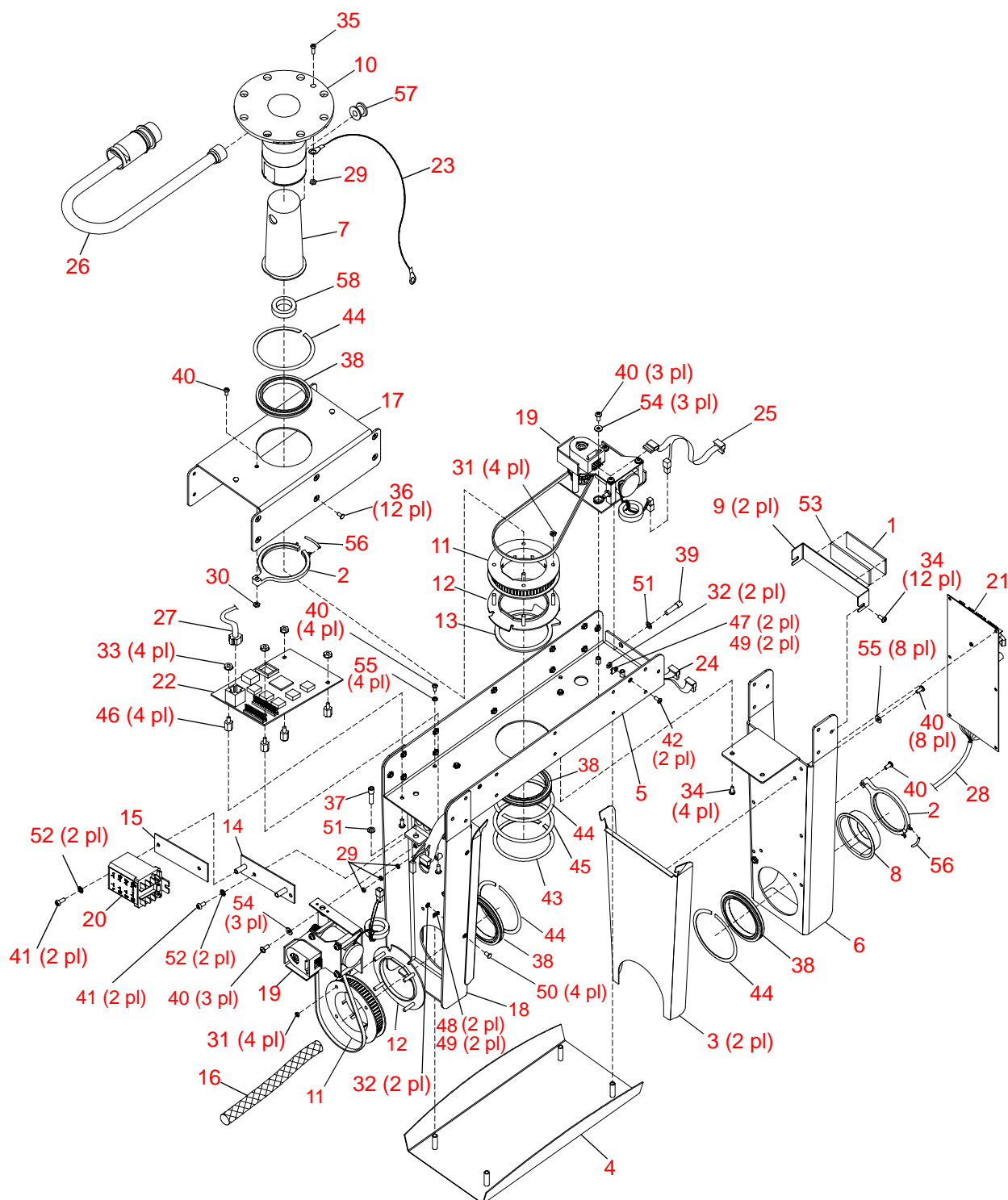


Figure 3-43: VL6B/VL6C Yoke Assembly

Pan/Tilt Mechanism Assembly VL6/VL6B/VL6C

22.9638.0059.01

Refer to [Figure 3-44](#) and [Figure 3-45](#).

No.	Item	Qty	UM	Description
1	10.9620.0293	1	EA	PAD, ANTI-BACKLASH, PTA
2	10.9628.0117	1	EA	SPACER, ADJUSTMENT, BACKLASH, TILT
3	10.9628.0143	1	EA	STANDOFF, SPECL RND 6-32 X 1 5/16 X .187
4	10.9628.0144	1	EA	STANDOFF, SPECIAL, SQR, TILT MECHANISM
5	10.9634.0019	1	EA	GEAR, WORM, 1M6RL17080
6	10.9634.0051	1	EA	WASHER, "D" PTA
7	10.9634.0053	1	EA	PLATE, TOP, PTA
8	10.9634.0054	1	EA	MOUNT, MOTOR, PTA
9	22.9634.0052	1	EA	PLATE ASSY, BOTTOM, PTA
10	22.9638.0220	1	EA	ASSY, DRIVE SHAFT - PAN & TILT
11	22.9638.0236	1	EA	ASSY, MAXON MOTOR -VL6
12	10.9634.0055	1	EA	WORM, PTA
13	44.5032.0001	1	EA	MOTOR, 22MM LG SHAFT W/LEAD WIREW -VL6
14	52.6435.2202	1	EA	CONN, MTA156 RED 2-PIN (CBL-CBL)
15	52.6436.0002	1	EA	COVER, STRAIN RELIEF/2-POS MAT156
16	53.5652.0125	1	EA	SCREW, 2-56 X 1/8" SET KNURLED-END BLK
17	45.5105.0002	1	EA	ENCODER, OPTICAL J06
18	53.2001.0001	1	EA	NUT, 10-32, KEPS ZINC PLATED
19	53.5506.0312	4	EA	SCREW, 6-32 X 5/16" PPSS
20	53.6513.0004	3	EA	SCREW, 2MM X 4MM LG PPSS METRIC
21	53.6534.0002	2	EA	RIVET, 3/32" OD POP 3/16 GRIP RNG ALUM
22	53.6609.0001	3	EA	SCREW, 6-32 X 3/8" PFZ
23	53.6667.0003	1	EA	SCREW, 10-32 X 1" SS SET OVAL TIP
24	54.1208.0001	1	EA	BEARING, 1/4"
25	54.1208.0003	1	EA	BEARING, 1/4" ID X 3/8" OD
26	54.1222.0002	1	EA	RING, RETAINING METRIC F/ 9MM SHAFT
27	54.2008.0001	1	EA	BELT, VL5, 1/5P, 80T, 290W, KEVLAR
28	55.2110.0002	2	EA	WASHER, .400" OD .260" ID .010" THK FLAT SS
29	55.2123.0003	1	EA	WASHER, WAVE SPRING, W0367-006-S
30	55.2128.0001	7	EA	SPRING, DISC CLUTCH -VL5
31	55.6538.0001	4	EA	WASHER, #6 LOCK INTERNAL TOOTH
32	55.6579.0003	3	EA	GROMMET, 3/8" HOLE DIA X .219" ID ISODAMP VL5 PTA
33	55.6677.0007	1	EA	WASHER, .750" OD .383" ID .031" THK FLAT CS BLK OXDZ
34	55.6677.0008	1	EA	WASHER, .875" OD .378" ID .010" THK FLAT SS
35	67.4008.0001	1	EA	BEAD, EMI .748 I.D.

Pan/Tilt Mechanism Assembly VL6/VL6B/VL6C (cont.)

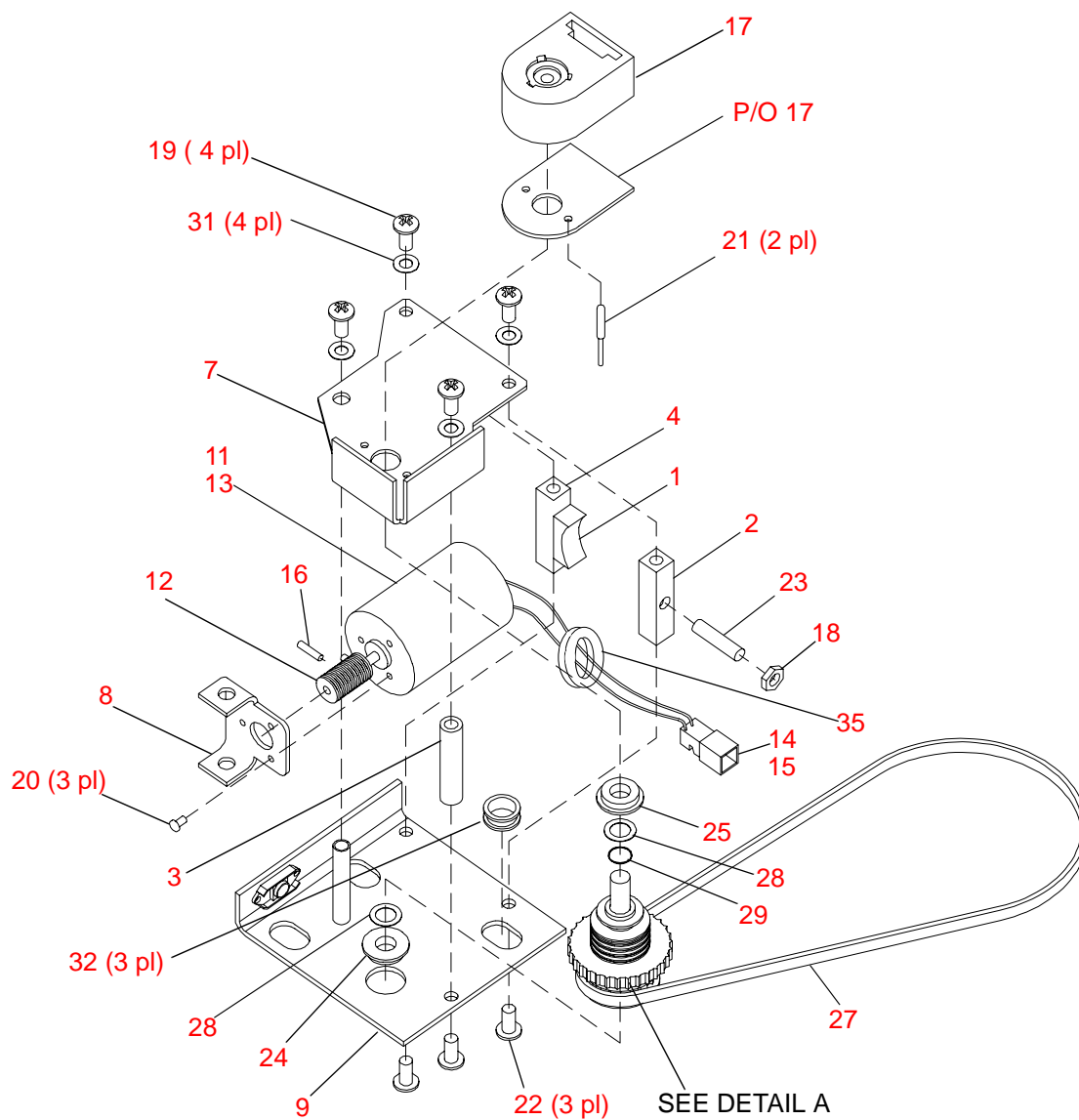
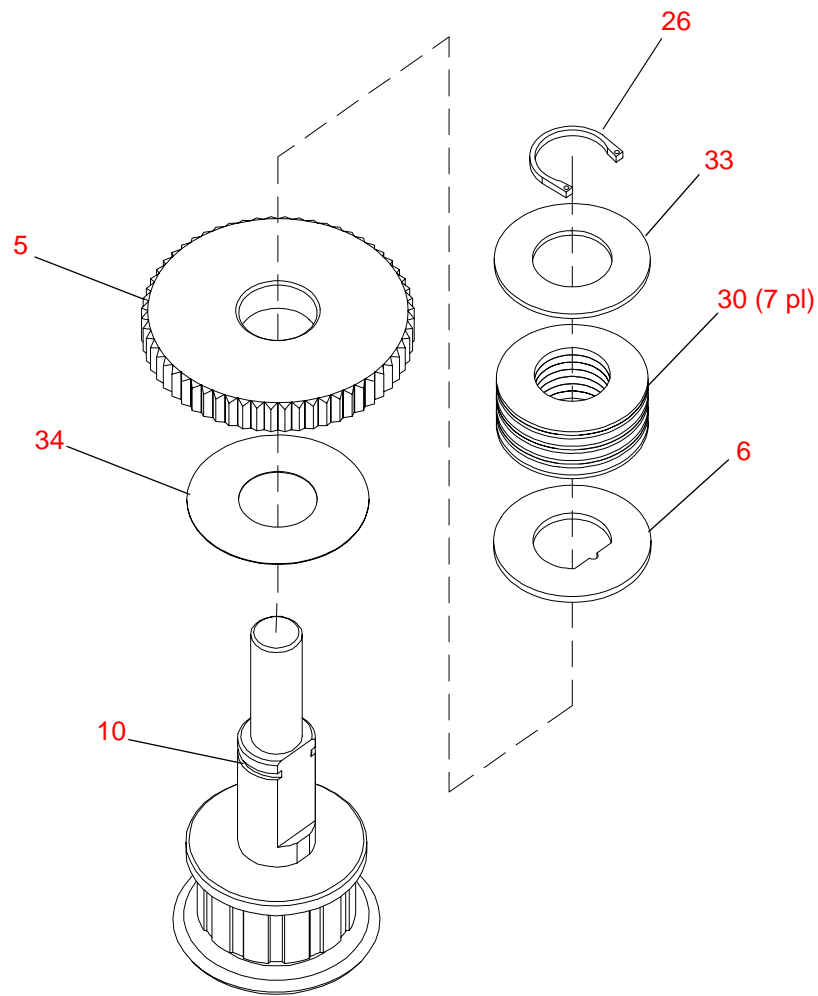


Figure 3-44: Pan/Tilt Mechanism Assembly

Pan/Tilt Mechanism Assembly VL6/VL6B/VL6C (cont.)



DETAIL A

Figure 3-45: Pan/Tilt Mechanism Assembly

Lamp Control PCB Assembly VL6/VL6B/VL6C

24.9638.0009.01

Refer to [Figure 3-46](#).

No.	Item	Qty	UM	Description
1	11.9638.0010	1	EA	PCB, VL6 CONTROL
2	22.9638.0087	1	EA	KIT, COMPONENTS, VL6 PCB ASSY
3	52.5000.0002	1	EA	SOCKET, 132-PIN PQFP PGA ADVANCED INTRON
4	53.5508.0500	1	EA	SCREW, 8-32 X 1/2" PPSS
5	55.3303.0008	1	EA	WASHER, #8 LOCK INT. TOOTH SS
6	87.7156.0003	1	EA	EPROM, PGMD:27C010A-10/VL6 V3.0 12-14-99

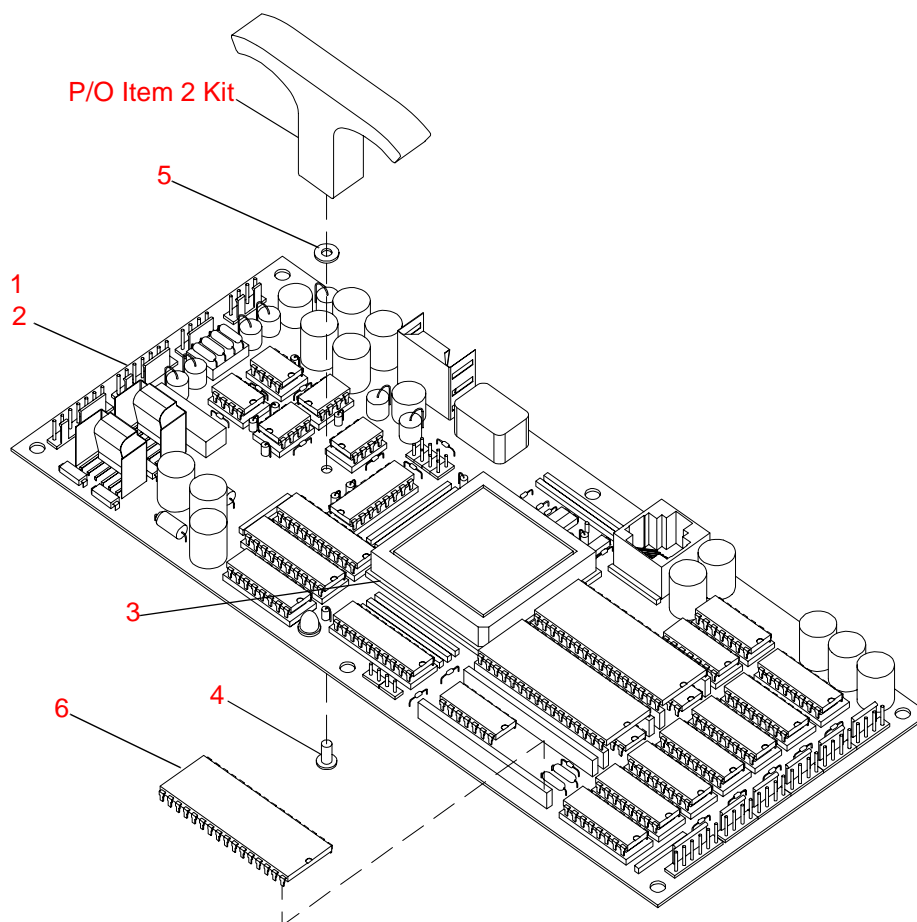


Figure 3-46: Lamp Control PCB Assembly

PCB Assembly Components Kit VL6/VL6B/VL6C

22.9638.0087

Refer to [Figure 3-47](#).

No.	Item	Qty	UM	Description	Ref
1	50.2708.0001	6	EA	SOCKET, 8-PIN DIP	XF1, XU23, XU25, XU26, XU30
2	50.2714.0001	1	EA	SOCKET, 14-PIN DIP	XU22
3	51.5017.0001	1	EA	HEATSINK, 7128D, TO-220	U24
4	51.5018.0001	2	EA	HEATSINK, 7148D, TO-220	U27, U28
5	52.5000.0001	1	EA	TERM STRIP, 4-PIN, DBL-ROW TSW	P7
6	52.5000.0003	1	EA	COVER, SOCKET 132-POS PQFP #821942-1	
7	52.5000.0004	1	EA	SOCKET, 132-POS PQFP #821949-5	XU18
8	52.5000.0016	5	EA	SOCKET, 16-PIN DIP TINNED	XU1, XU2, XU15, XU16, XU19
9	52.5000.0020	3	EA	SOCKET, 20-PIN DIP OPEN FRAME	XU17, XU20, XU21
10	52.6240.0001	1	EA	HEADER, 6-POS MTA FRCT LOK STRT POST	P1
11	52.6259.0001	2	EA	HEADER, 5-POS MTA FRCT LOK STRT POST	P8B, P9B
12	52.6284.0001	6	EA	HEADER, 4-POS MTA FRCT LOK STRT POST	P2-P6, P10
13	52.6297.0001	4	EA	HEADER, 2-PIN MTA FRCT LOK STRT POST	P8A, P9A, P11A, P11B
14	52.6373.0004	2	EA	SOCKET STRIP, 12-POS SGL ROW LOW PRO.	XU17
15	52.6373.0005	4	EA	SOCKET STRIP, 8-POS SGL ROW LOW PRO.	U11, U13
16	52.6373.0007	4	EA	SOCKET STRIP, 8-POS DOUBLE ROW	XU14
17	52.6373.0008	2	EA	SOCKET STRIP, 8-POS SGL ROW TIN	XU14
18	52.6374.0007	2	EA	SOCKET STRIP, 7-POS SNGL ROW LOW PROFILE	XU14
19	52.6399.0001	1	EA	JUMPER, PROGRAMMING	J2
20	52.6433.0001	1	EA	PLUG, ADAPTER, 8-PIN, LCP, SAMTEC	AF1
21	52.6437.0016	6	EA	SOCKET STRIP, 16-POS ELEVATED .33"	U8A, U8B, U10A, U10B, U12A, U12B
22	52.8284.0001	3	EA	HEADER, 2-PIN SGL ROW STRGHT GOLD CONT .100CNTR	J2-J4
23	52.8402.0002	1	EA	JACK, MODULAR 8-PIN STRAIGHT	J1
24	55.6703.0001	1	EA	HANDLE, VL5 PCB, BLACK	
25	60.1420.2703	2	EA	RES, 1/4W 5% 2.7K CF	R7, R8

No.	Item	Qty	UM	Description	Ref
26	60.1422.1001	4	EA	RES, 1/4W 5% 1.0K CF	R5, R6, R10, R13
27	60.1424.4703	1	EA	RES, 1/4W 5% 470.0 OHM CF	R1
28	60.1425.1003	1	EA	RES, 1/4W 5% 100.0 OHMS CF	R11
29	60.1425.5603	1	EA	RES, 1/4W 5% 560.0 OHM CF	R2
30	60.1429.3303	2	EA	RES, 1/4W 5% 330.0 OHM CF	R9, R12
31	60.1429.3305	1	EA	RES, 1/4W 5% 330.0K CF	R3
32	60.5000.0002	1	EA	RES, 1/4W 5% 20.0 MEG	R4
33	61.4306.0103	1	EA	RES SIP, 103 6-PIN BUSSED LW PROFILE	RP1
34	61.4306.0472	2	EA	RES SIP, 472 6-PIN BUSSED LW PRFLE	RP5, RP14
35	61.4310.0103	11	EA	RES SIP, 103 10-PIN BUSSED	RP2-RP4, RP6-RP13
36	62.2013.0104	36	EA	CAP, .1UF, 50V, AXL, CERAMIC, .100", 20%	C1-C7, C16-C19, C20-C25, C28, C29, C30, C31, C35-C39, C40-C44, C46, C52, C59, C60, C61
37	62.2034.0206	2	EA	CAP, 20PF, 50V, SIP, CERAMIC, .100", 5%	C27, C28
38	62.2094.0106	7	EA	CAP, 10UF, 35V, TANTALUM AXIAL 20%	C8 -C12, C48, C51
39	62.2099.0104	3	EA	CAP, .1UF, 50V, SIP, CERAMIC, .100", 10%	C32-C349
40	62.3002.0103	4	EA	CAP, .01UF, 50V, RAD, CERAMIC	CC55-C58
41	62.3002.0477	1	EA	CAP, 470UF, 10V, RAD, ALUMINUM	C45
42	62.3005.0477	12	EA	CAP, 470UF, 35V, RAD, ALUMINUM	C13-C15, C 26, C27, C47, C49, C50, C53, C54, C62, C63
43	64.4003.0001	1	EA	CRYSTAL, 32.768 KHZ	Y1
44	68.4525.0006	1	EA	INDUCTOR, 470uH, PE52628/PE52648	L1
45	70.3729.0001	4	EA	FUSE, 1/16A, 125V, PICO II	F1
46	70.3731.0001	1	EA	FUSE, 5AMP, 19374K, TR5-T TIME LAG	F2
47	70.3732.0001	1	EA	FUSEHOLDER, TR5, 19560	XF2
48	82.4309.5401	1	EA	DIODE, 1N5401 RECTIFIER 100V 3A	D2
49	82.4316.5822	1	EA	DIODE, 1N5822 SCHOTTKY 40V 3A	D1
50	82.5301.5908	4	EA	DIODE, ZENER TS 1N5908 5V 5W	D3-D6
51	82.5316.6281	1	EA	DIODE, ZENER 1N6281 27V 1500W 10%	D7
52	83.3157.0001	2	EA	IC, 6N137, OPTOCOUPLER	U25, U26
53	83.5000.0001	5	EA	IC, L293D, QUAD HALF-BRIDGE DRIVER	U3-U7
54	83.5000.0003	1	EA	IC, LM2575T-5.0, VOLTAGE REG., SWITCHING	U24
55	83.5000.0004	2	EA	IC, LMD18200, H-BRIDGE, 55V, 3A	U27, U28
56	84.0068.0332	1	EA	IC, MC68332, MICROPROCESSOR	U18
57	84.4131.0001	1	EA	IC, 74HC05 HEX INVERTER W/OPEN COLLECTOR	U22
58	84.4234.0001	2	EA	IC, LTC485CN8 RS422/RS485 TRANSCEIVER DIP PKG	U30, U31

No.	Item	Qty	UM	Description	Ref
59	84.5000.0004	1	EA	IC, 74HC32 QUAD 2-INPUT OR GATE	U14
60	84.5000.0014	2	EA	IC, 581001-70 128K X 8 STATIC RAM, 70SPEED	U10, U12
61	84.7407.0174	6	EA	IC, 74HC174 HEX D-FF W/CLR	U2, U11, U13, U15, U16, U19
62	84.7411.0001	1	EA	IC, HPR100, DC TO DC CONVERTER, 5V IN/OUT	U29
63	85.5000.0701	1	EA	IC, MAX701, PWR SUPPLY MONITOR	U23
64	85.5104.0002	2	EA	IC, HCTL-2020, DECODER	U20, U21
65	85.5119.0001	1	EA	IC, 75173, QUAD DIF. LINE RCVR	U1
66	87.7132.0002	1	EA	IC, LOGIC PGM:VL5 U10 2624	U17
67	87.7145.0002	1	EA	IC, LOGIC PGM:VL6 U9	U9
68	88.8101.0001	1	EA	LED, RED T-1 3/4 ROUND	LED1

PCB Assembly Components Kit VL6/VL6B/VL6C (cont.)

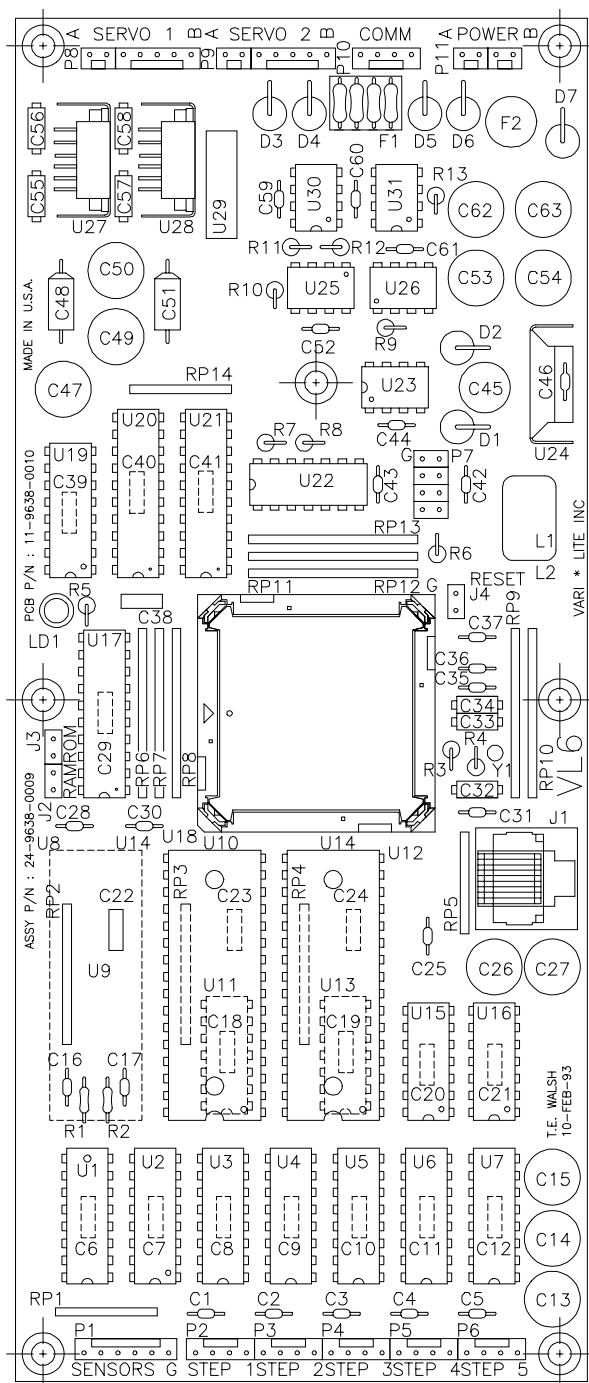


Figure 3-47: PCB Assembly Components Kit

Relay Assembly VL6B/VL6C

23.9650.3327

Refer to [Figure 3-48](#).

No.	Item	Qty	UM	Description
1	04.9650.0044	1	EA	LABEL, RELAY WIRING -VL7
2	52.8271.0005	2	EA	RECP, FASTON 1/4" 16-14AWG INS. (REEL)
3	66.4510.0002	1	EA	RELAY, 20A 250VAC DPDT UL/CSA/VDE
4	82.4307.4002	1	EA	DIODE, 1N4002 RECTIFIER 100V 1A

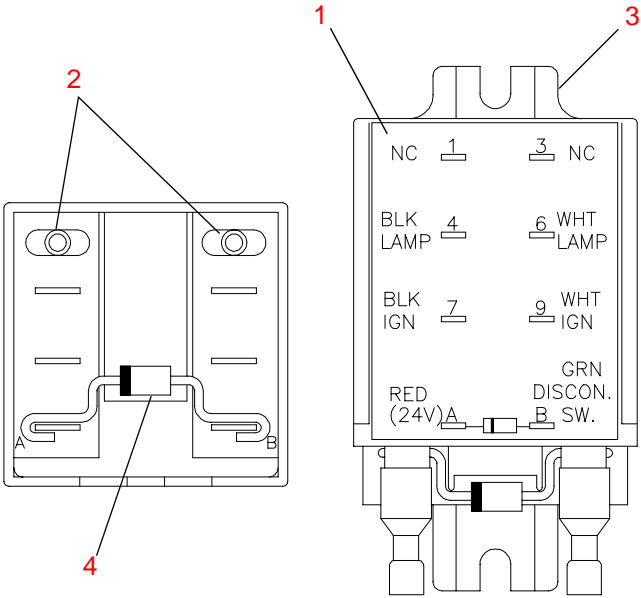


Figure 3-48: VL6B/VL6C Relay Assembly

Controller PCB Assembly VL6B/VL6C

24.9660.0500

Refer to [Figure 3-49](#).

No.	Item	Qty	UM	Description	Ref
1	11.9660.0500	1	EA	PCB, VL6B CONTROLLER	
2	50.4001.0032	1	EA	SOCKET, 32-PIN LOW PROFILE PLCC SUR MT	XU12
3	52.6297.0001	1	EA	HEADER, 2-PIN MTA FRCT LOK STRT POST	J7
4	52.6357.0012	1	EA	HEADER, 1-2POS MTA100 FRCT LOK STRT POST	J3
5	52.6357.0014	1	EA	HEADER, 14-POS MTA100 FRCT LOK STRT POST	J2
6	52.6399.0001	1	EA	JUMPER, PROGRAMMING	XJ4
7	52.6463.0002	2	EA	HEADER, 2-POS MTA-100 FLAT STR TIN PLT	J4, J6
8	52.8402.0002	1	EA	JACK, MODULAR 8-PIN STRAIGHT	J5
9	60.3241.1000	8	EA	RES, 1W 1% 1.0 OHM WW +/-100PPM DEG C	R1, R7, R9, R20, R24, R25, R34, R41
10	60.9460.1003	2	EA	RES, .1W 5% 1.0K 100V CHIP THICK FILM SMT0805	R33, R54
11	60.9460.3303	2	EA	RES, .1W 5% 3.3K 100V CHIP THICK FILM	R2, R53
12	60.9460.7505	1	EA	RES, .1W 5% 750.0K 100V CHIP THICK FILM	R31
13	60.9461.1004	7	EA	RES, .1W 1% 10.0K 100V CHIP THK FLM SMT0805	R11, R16, R17, R30, R38, R48, R55
14	60.9461.1504	6	EA	RES, .1W 1% 15.0K 100V CHIP THK FLM SMT0805	R12, R18, R28, R40, R42, R46
15	60.9461.2433	8	EA	RES, .1W 1% 2.43K 100V CHIP THK FLM SMT0805	R5, R8, R21, R23, R26, R32, R37, R39
16	60.9461.7503	12	EA	RES, .1W 1% 7.5K 100V CHIP THK FLM SMT0805	R4, R6, R10, R13- R15, R19, R22, R27, R29, R35, R36
17	62.2104.3826	1	EA	CAP, 82UF 35V RAD ALUM 6.3 X 15MM 20% LOW ESR	C38
18	62.3009.0472	4	EA	CAP, 4700PF 50V 10% MONO CER CHIP SUR MT	C5, C15, C25, C31
19	62.3009.0473	12	EA	CAP, .047UF 50V 10% MONO CER CHIP SUR MT	C1, C3, C6, C8, - C11, C16-C18, C23, C24

No.	Item	Qty	UM	Description	Ref
20	62.4000.0105	9	EA	CAP, .1UF 50V 20% CER CHIP SUR MT Z5U EIA0805	C7, C12, C14, C21, C22, C26, C29, C30, C35
21	62.4000.0200	2	EA	CAP, 20PF 50V 5% CER CHIP SUR MT COG EIA0805	C19, C20
22	62.4200.0106	4	EA	CAP, 10UF 35V 10% TANT SUR MT EIA-D	C4, C13, C27, C34
23	62.4205.0107	1	EA	CAP, 100UF 10V 20% SUR MT	C36
24	64.4016.0506	1	EA	CRYSTAL, 16MHZ SUR MT	Y1
25	68.4566.0001	1	EA	INDUCTOR, 173uH PE-53819S LCI-37 SUR MT	L1
26	70.3738.0001	5	EA	FUSE HOLDER, F/FUSE 70.3738.1001	F1-F4, F6
27	70.3742.0002	2	EA	FUSE, POLY 60V MAX IH=.40A IT=.80A @ 20 DEG C	PTC1, PTC2
28	74.1047.0001	1	EA	SWITCH, KEY SUR MT	S1
29	82.4322.0001	1	EA	DIODE, TVS ZENER 1.5SMC27AT3 27V 40A SMT	D3
30	82.5325.0001	1	EA	DIODE, MBRS130LT3 SCHOTTKY SUR MT	D2
31	83.3173.0005	1	EA	IC, LM2594M-5 150KHZ 0.5A STEP-DOWN VOLTAGE REGULATOR	VR1
32	84.0068.0812	1	EA	IC ,MC68HC812A4PV8 (UNPRGMMD) 16BIT MICROCONTROLLER	U6
33	84.4263.0001	1	EA	IC, AD7302BR 8-BIT DAC 2.7-5.5V PARALLEL INPUT DUAL VOLTAGE OUTPUT	U9
34	84.4285.0001	1	EA	IC, NC7S04M5 HS INVERTER	U5
35	84.4288.0001	1	EA	IC, MAX6314US44D3-T MICROPROCESSOR RESET CIRCUIT	U1
36	85.3773.0001	4	EA	IC, STEPMOTOR DRIVER	U2-U4, U7
37	87.7184.0001	1	EA	EEPROM, PGMD:SST29EE512-904CNH VL6B AUX	U12
38	88.8130.0001	1	EA	LED, GREEN SUR MT WATER CLEAR LENS (REEL)	D1
39	88.8133.0004	1	EA	LED, AMBER SUR MT HI PERFORMANCE	D4

Controller PCB Assembly VL6B/VL6C (cont.)

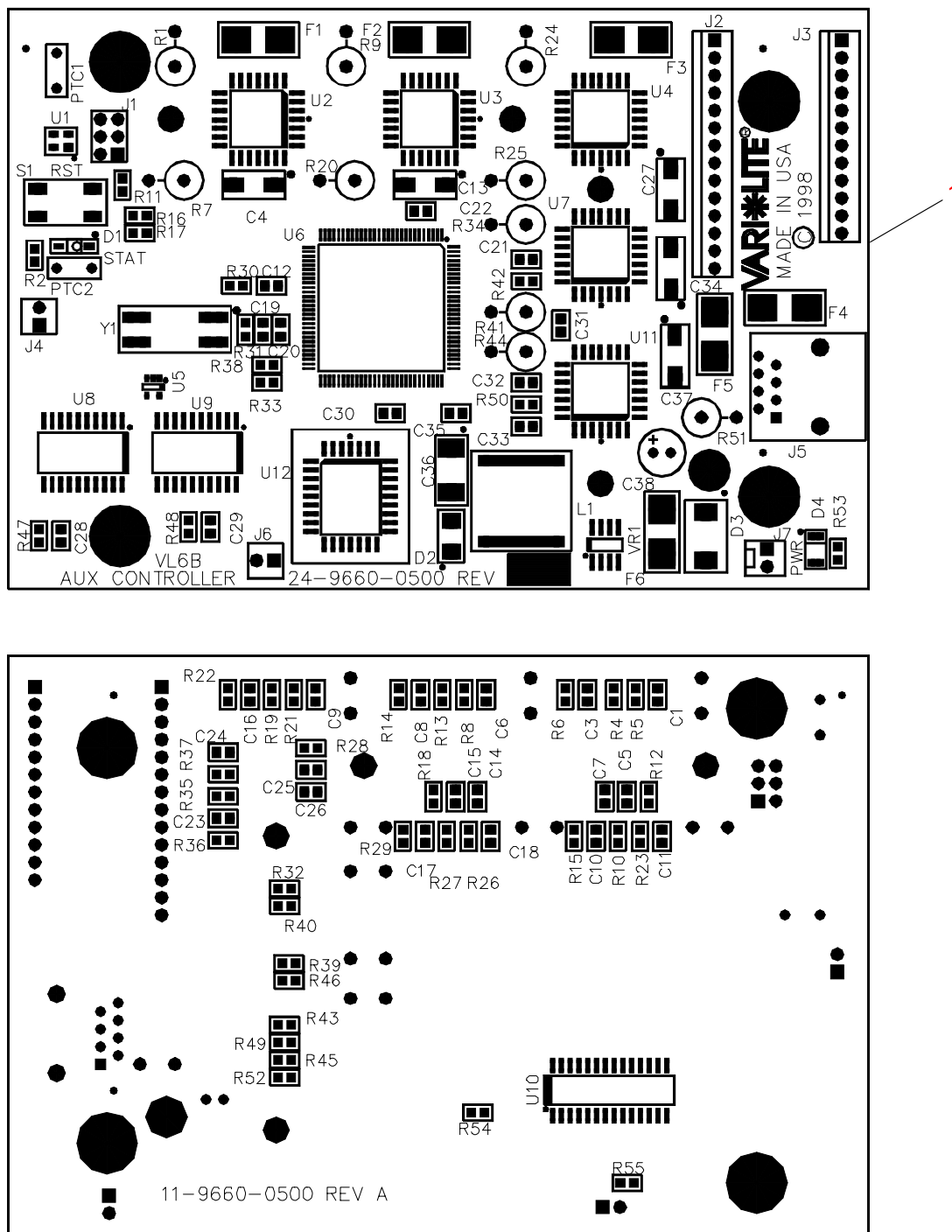


Figure 3-49: VL6B/VL6C Controller PCB Assembly

Cables

#1 IGN6 Cable Assembly VL6

25.8005.0001

Refer to [Figure 3-50](#).

No.	Item	Qty	UM	Description
1	52.6424.0002	2	EA	COVER, STRAIN RELIEF/2POS MTA
2	52.6396.2202	2	EA	RECEPT.MTA100 W/TAB RED 2 POS.
3	73.7089.0002	1	FT	WIRE, 22AWG RED 300V TEFLON STRANDED
4	73.7089.0504	1	FT	WIRE, 22AWG 300V 200C TEF GRN/YEL UL1180

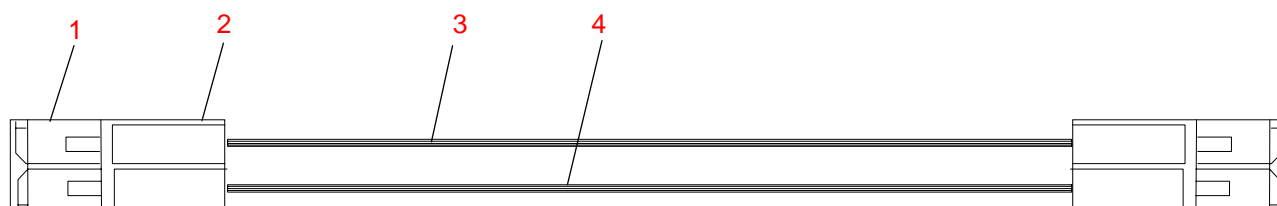


Figure 3-50: #1 IGN6 Cable Assembly

Input W/Grn-Yel Cable Assembly VL6

25.9634.0180

Refer to [Figure 3-51](#).

No.	Item	Qty	UM	Description
1	52.6396.2202	2	EA	RECEPT, 2-POS MTA100 W/POL TAB RED CLSD END
2	52.6396.2204	1	EA	RECEPT, 4-POS MTA100 W/POL TAB RED 4 CLSD END
3	52.6400.0015	1	EA	RECEPT, 17-16, FREE HANG CPC
4	52.6424.0002	2	EA	COVER, 2-POS CLOSED END STRAIN RELIEF - MTA
5	52.6424.0004	1	EA	COVER, 4-POS CLOSED END STRAIN RELIEF - MTA
6	52.6431.0002	1	EA	BACKSHELL, CPC17 NYLON .300-.525 CBL RNG
7	52.8201.0001	5	EA	CONTACT PIN, 22AWG GLD (REEL) TYPE 3+
8	52.8202.0001	7	EA	CONTACT PIN, TIN 18-16AWG (REEL) TYPE 3+
9	52.8231.0005	1	EA	TERM, RING #6 BLUE 16-14 AWG REEL PIDG
10	52.8298.0002	2	EA	TERM, WIRE PIN 16-14 GA.
11	54.1223.0001	1	EA	CORD GRIP, 1/2" NPT, 610GRIP KELLUMS D-LUX
	55.2199.0002	0.25	FT	HEATSHRINK, 1/16" CLEAR (not shown)
12	73.7087.0002	3	EA	CABLE, INTEGRAL VL5 W/GRN-YEL

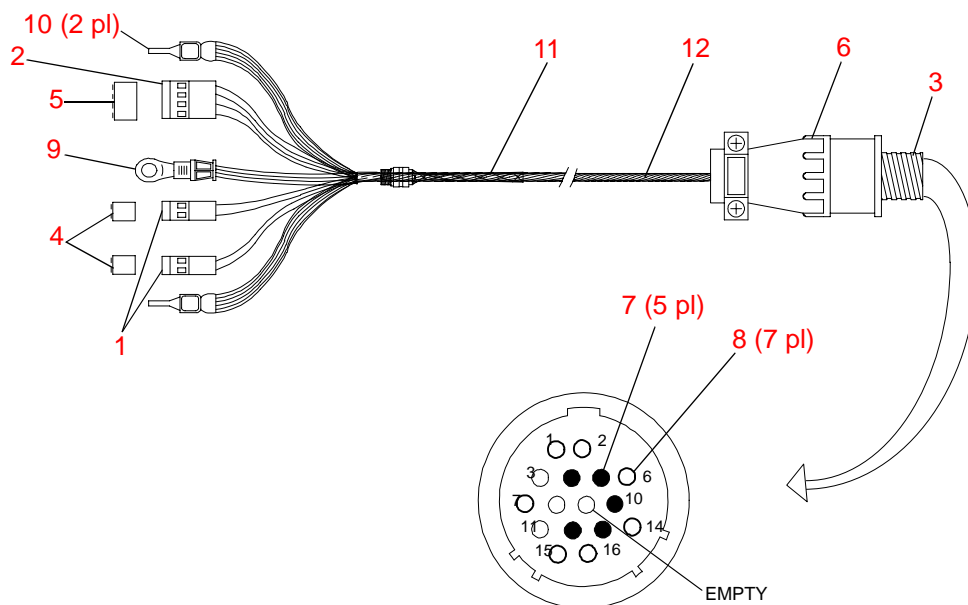


Figure 3-51: VL6 Input W/Grn-Yel Cable Assembly

Yoke Cable Assembly VL6

25.9638.0073

Refer to [Figure 3-52](#).

No.	Item	Qty	UM	Description
1	06.6042.0002	1	EA	QUIK-DOT MARKER, 1/4" RED
2	06.6042.0004	1	EA	QUIK-DOT MARKER, 1/4" YELLOW
3	06.6042.0006	1	EA	QUIK-DOT MARKER, 1/4" BLUE
4	52.6224.0003	1	EA	COVER, BACK 34-POS, MT
5	52.6224.0004	1	EA	COVER, EJECTION 34-POS MT
6	52.6224.0005	1	EA	HOUSING, 34-POS 26-22AWG PRELOADED MT RECEPT DBL ROW MT
7	52.6396.2202	1	EA	RECEPT, 2-POS MTA100 W/POL TAB RED CLSD END
8	52.6396.2604	5	EA	RECEPT, 4-POS MTA100 W/POL TAB BLUE CLSD END
9	52.6396.2606	1	EA	RECEPT, 6-POS MTA100 W/POL TAB BLUE CLSD END
10	52.6424.0002	1	EA	COVER, 2-POS CLOSED END STRAIN RELIEF - MTA
11	52.6424.0004	5	EA	COVER, 4-POS CLOSED END STRAIN RELIEF - MTA
12	52.6424.0006	1	EA	COVER, 6-POS CLOSED END STRAIN RELIEF - MTA100
13	55.2197.0001	1.83	FT	HEAT SHRINK 3/8" BLACK
14	55.2240.0020	0.08	FT	HEAT SHRINK, 1/8" HCG BLACK
15	55.2240.0021	0.08	FT	HEAT SHRINK, 1/8" HCG CLEAR
16	55.2240.0022	0.08	FT	HEAT SHRINK, 1/8" HCG WHITE
17	55.2240.0023	0.08	FT	HEAT SHRINK, 1/8" HCG RED
18	55.2240.0024	0.08	FT	HEAT SHRINK, 1/8" HCG YELLOW
19	55.2240.0025	0.08	FT	HEAT SHRINK, 1/8" HCG BLUE
20	73.7089.0002	2.33	FT	WIRE, 22AWG RED 300V TEFLON STRANDED
21	73.7089.0504	2.33	FT	WIRE, 22AWG 300V 200C TEF GRN/YEL UL1180
22	73.7094.0003	1.67	FT	WIRE, 26AWG, 25COND, MULTI, TEFLON, 19 STRAND

Yoke Cable Assembly VL6 (cont.)

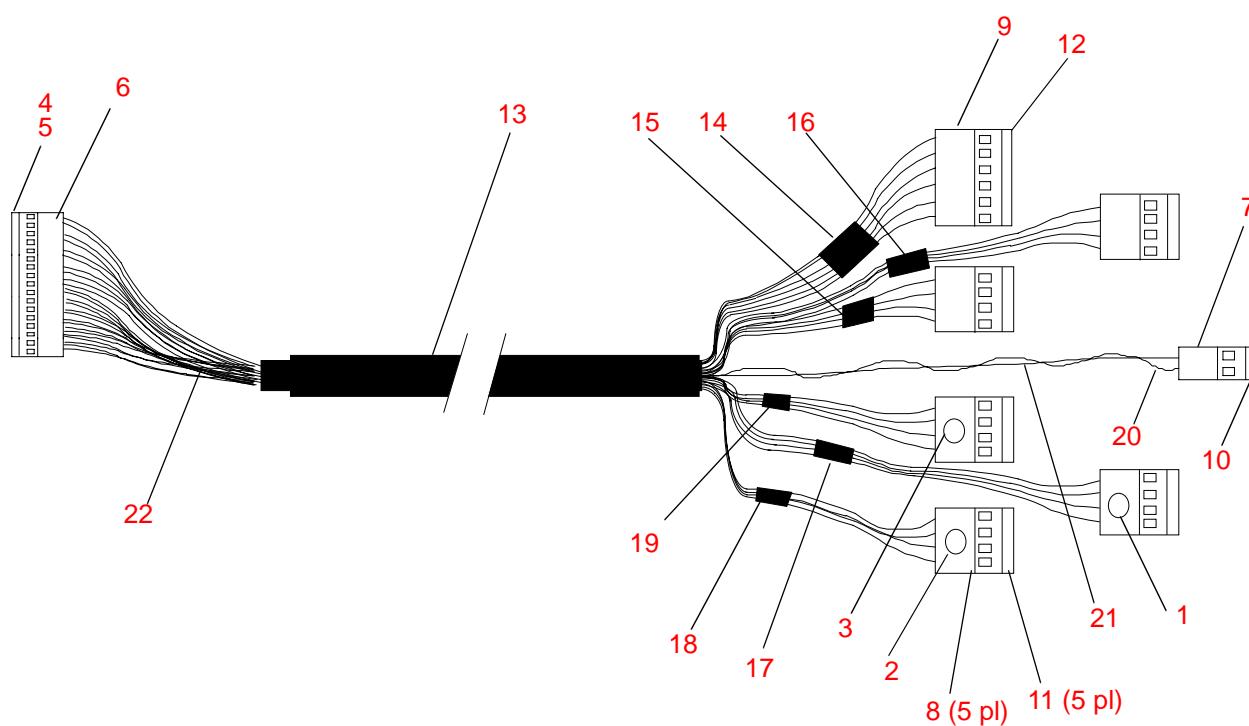


Figure 3-52: VL6 Yoke Cable Assembly

Wh1 Sensor Jumper Cable Assembly VL6/VL6B/VL6C

25.9638.0149

Refer to [Figure 3-53](#).

No.	Item	Qty	UM	Description
1	52.6396.2203	2	EA	RECEPT, 3-POS MTA100 W/POL TAB RED CLSD END
2	52.6424.0003	2	EA	COVER, 3-POS CLOSED END STRAIN RELIEF - MTA100
3	73.7089.0002	0.50	FT	WIRE, 22AWG RED 300V TEFLON STRANDED
4	73.7089.0009	0.50	FT	WIRE, 22AWG WHT TEFLON STRANDED
5	73.7089.0504	0.50	FT	WIRE, 22AWG 300V 200C TEF GRN/YEL UL1180

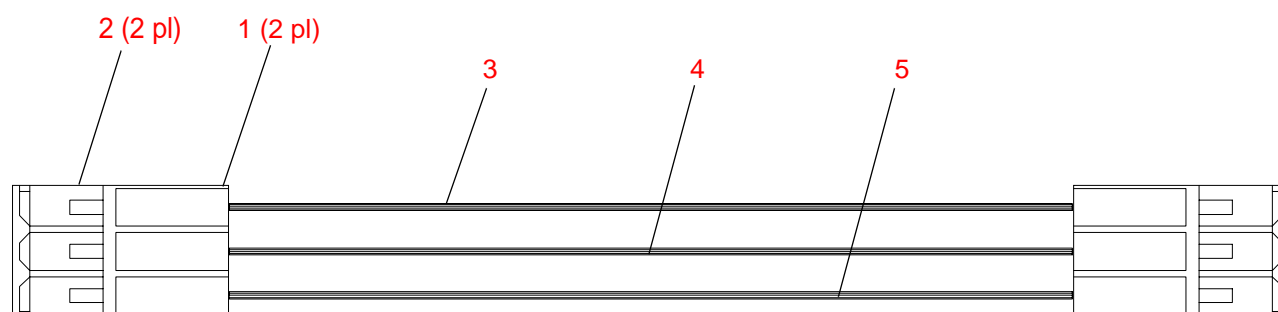


Figure 3-53: WH1 Sensor Jumper Cable Assembly

WH2 Sensor Jumper Cable Assembly VL6/VL6B/VL6C

25.9638.0150

Refer to [Figure 3-54](#).

No.	Item	Qty	UM	Description
1	52.6396.2203	2	EA	RECEPT, 3-POS MTA100 W/POL TAB RED CLSD END
2	52.6424.0003	2	EA	COVER, 3-POS CLOSED END STRAIN RELIEF - MTA100
3	73.7089.0002	0.25	FT	WIRE, 22AWG RED 300V TEFLON STRANDED
4	73.7089.0009	0.25	FT	WIRE, 22AWG WHT TEFLON STRANDED
5	73.7089.0504	0.25	FT	WIRE, 22AWG 300V 200C TEF GRN/YEL UL1180

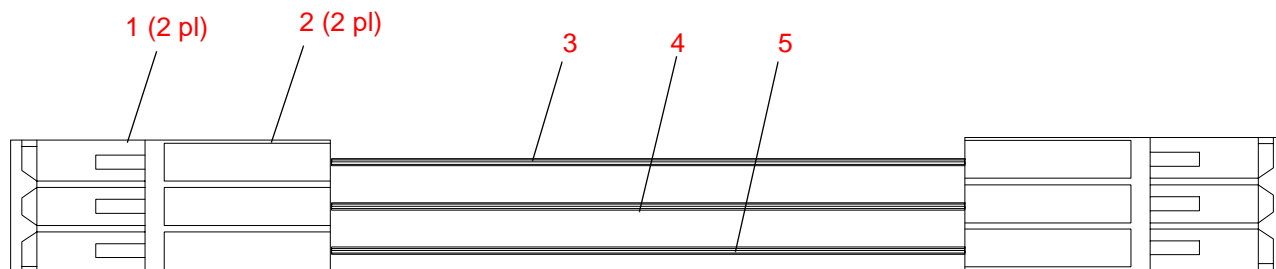


Figure 3-54: WH2 Sensor Jumper Cable Assembly

Ground Cable Assembly VL6/VL6B/VL6C

25.9638.0201

Refer to [Figure 3-55](#).

No.	Item	Qty	UM	Description
1	52.8231.0005	2	EA	TERM, RING #6 BLUE 16-14 AWG PIDG
2	73.7089.0504	6.34	FT	WIRE, 22AWG 300V 200C TEF GRN/YEL UL1180

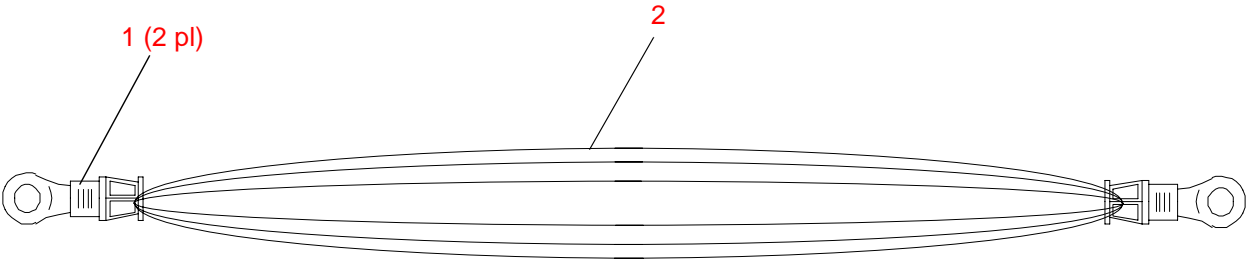


Figure 3-55: Ground Cable Assembly

Ignitor Cable Assembly VL6

25.9638.0202

Refer to [Figure 3-56](#).

No.	Item	Qty	UM	Description
1	52.8298.0002	4	EA	TERM, WIRE PIN 16-14 GA.
2	73.7089.0000	12.50	FT	WIRE, 22AWG BLK 300V TEFLON STRANDED
3	73.7089.0009	12.50	FT	WIRE, 22AWG WHT TEFLON STRANDED

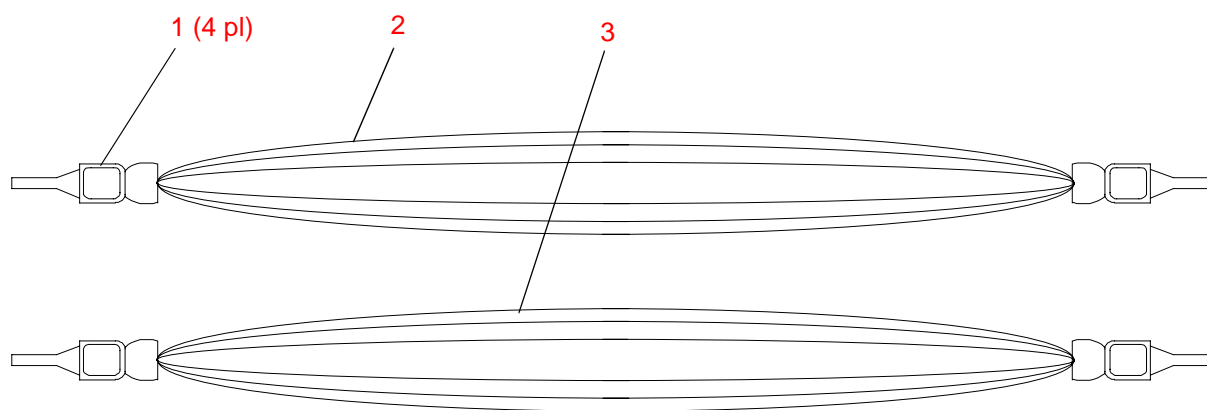


Figure 3-56: VL6 Ignitor Cable Assembly

Ignitor Board Output Cable Assembly VL6

25.9638.0222

Refer to [Figure 3-57](#).

No.	Item	Qty	UM	Description
1	52.6264.0003	1	EA	CONN HOUSING, 30 SERIES W/FLNGS 3-POS
2	52.8247.0002	2	EA	CRIMP CONTACT, S30 TIN (REEL)
3	73.7027.0001	.033	FT	WIRE, 16AWG 30KV CHAMPLAIN ONLY 3239B

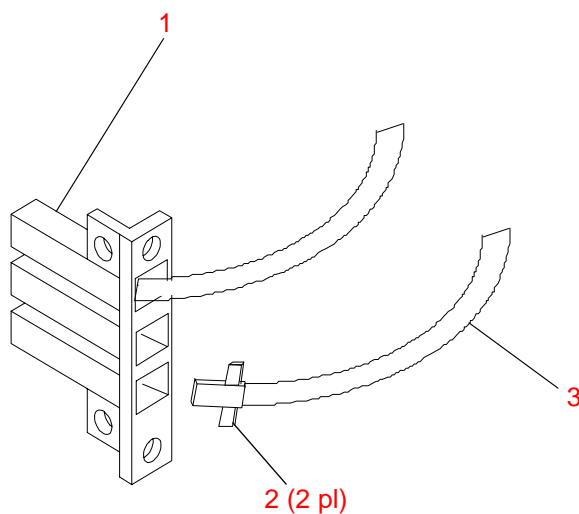


Figure 3-57: VL6 Ignitor Board Output Cable Assembly

Tilt Cable Assembly VL6/VL6B/VL6C

25.9643.0017

Refer to [Figure 3-58](#).

No.	Item	Qty	UM	Description
1	52.6270.0001	2	EA	CONN HOUSING, 5-PIN MTA CLOSED END RED
2	52.6396.0003	1	EA	COVER, 7-POS MTA100 STRAIN RELIEF
3	52.6396.2202	1	EA	RECEPT, 2-POS MTA100 W/POL TAB RED CLSD END
4	52.6424.0005	1	EA	COVER, 5-POS CLOSED END STRAIN RELIEF - MTA
5	52.6434.2202	1	EA	RECEPT, MTA156 RED 2-POS.
6	52.6436.0002	1	EA	COVER, STRAIN RELIEF/2-POS MTA156
7	55.2197.0001	0.08	FT	HEATSHRINK, 3/8" BLACK
8	55.2199.0002	0.17	FT	HEATSHRINK, 1/16" CLEAR
9	55.2200.0001	0.17	FT	HEATSHRINK, 3/16" BLACK
10	73.7039.0001	4.42	FT	CBL, 22AWG STRND 4COND POLYPR INSUL

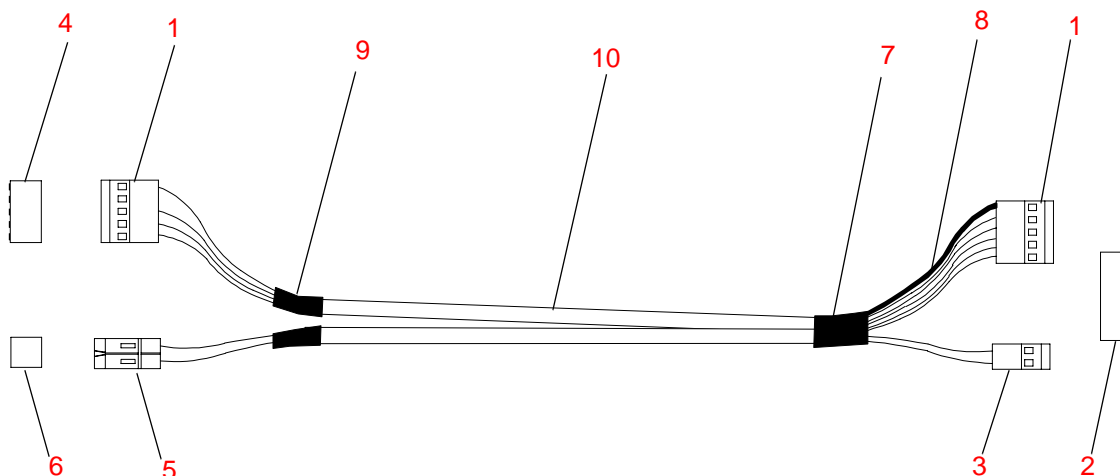


Figure 3-58: Tilt Cable Assembly

Pan Cable Assembly VL6/VL6B/VL6C

25.9643.0018

Refer to [Figure 3-59](#).

No.	Item	Qty	UM	Description
1	52.6270.0001	2	EA	CONN HOUSING, 5-PIN MTA CLOSED END RED
2	52.6396.0003	1	EA	COVER, 7-POS MTA100 STRAIN RELIEF
3	52.6396.2202	1	EA	RECEPT, 2-POS MTA100 W/POL TAB RED CLSD END
4	52.6424.0005	1	EA	COVER, 5-POS CLOSED END STRAIN RELIEF - MTA
5	52.6434.2202	1	EA	RECEPT, MTA156 RED 2-POS.
6	52.6436.0002	1	EA	COVER, STRAIN RELIEF/2-POS MTA156
7	55.2197.0001	0.08	FT	HEATSHRINK, 3/8" BLACK
8	55.2199.0002	0.17	FT	HEATSHRINK, 1/16" CLEAR
9	55.2200.0001	0.17	FT	HEATSHRINK, 3/16" BLACK
10	73.7039.0001	1.42	FT	CBL, 22AWG STRND 4COND POLYPR INSUL

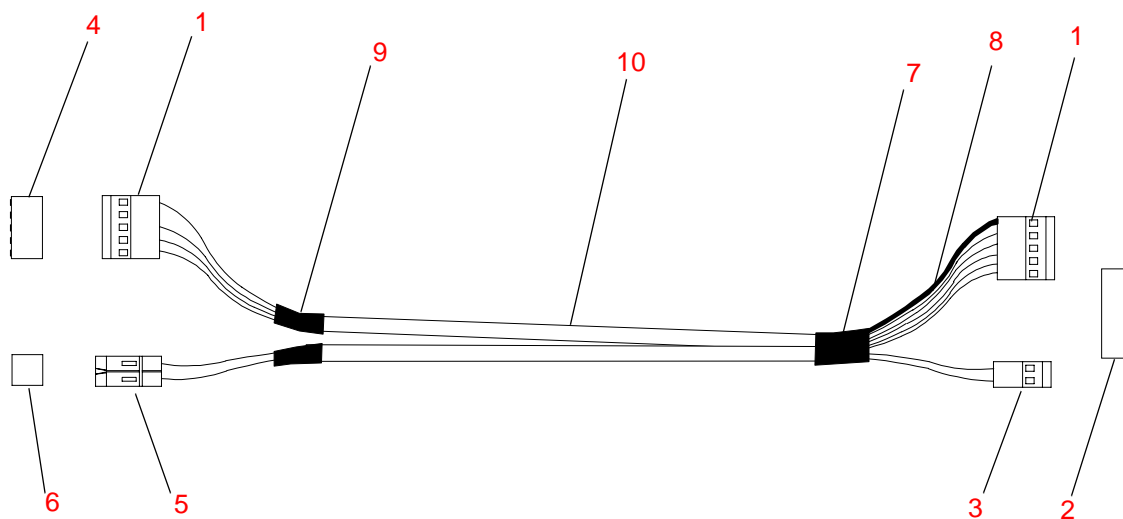


Figure 3-59: Pan Cable Assembly

Input Cable Assembly VL6B/VL6C

25.9647.0128

Refer to [Figure 3-60](#).

No.	Item	Qty	UM	Description
1	52.6396.2202	1	EA	RECEPT, 2-POS MTA100 W/POL TAB RED CLSD END
2	52.6396.2204	1	EA	RECEPT, 4-POS MTA100 W/POL TAB RED CLSD END
3	52.6400.0015	1	EA	RECEPT, 17-16, FREE HANG CPC
4	52.6424.0002	1	EA	COVER, 2-POS CLOSED END STRAIN RELIEF - MTA
5	52.6424.0004	1	EA	COVER, 4-POS CLOSED END STRAIN RELIEF - MTA
6	52.6431.0002	1	EA	BACKSHELL, CPC17 NYLON .300-.525 CBL RNG
7	52.8277.0001	5	EA	CONTACT PIN, 22AWG GLD (REEL) TYPE 3+
8	52.8276.0001	7	EA	CONTACT PIN, TIN 18-16AWG (REEL) TYPE 3+
9	52.8231.0005	1	EA	TERM, RING #6 BLUE 16-14AWG REEL PIDG
10	52.8244.0005	1	EA	FASTON RECEPT, INS, .250", 22-18AWG STRIP
11	52.8312.0001	2	EA	RECP, FASTON 1/4" 18-14AWG INSULATED VO
12	54.1223.0001	1	EA	CORD GRIP, 1/2" NPT 610GRIP KELLUMS D-LUX
	55.2199.0002	0.25	FT	HEATSHRINK, 1/16" CLEAR (not shown)
13	73.7087.0002	3	EA	CABLE, INTEGRAL VL5 W/GRN-YEL

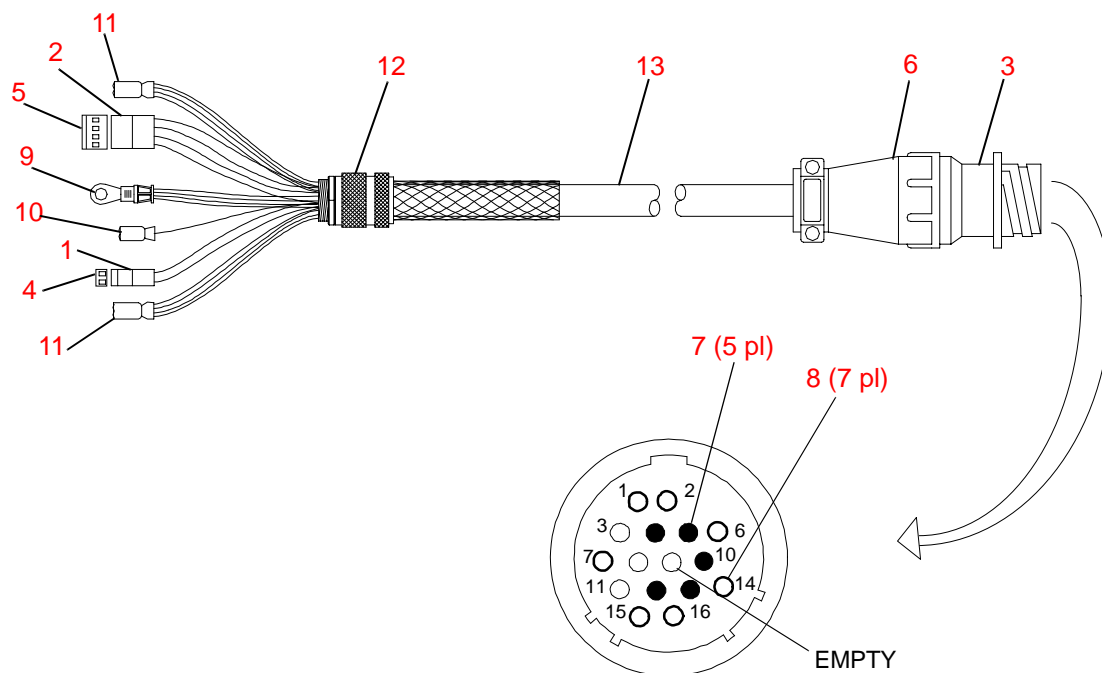


Figure 3-60: VL6B/VL6C Input Cable Assembly

Ignitor Board Input Cable Assembly VL6B/VL6C

25.9660.0501

Refer to [Figure 3-61](#).

No.	Item	Qty	UM	Description
1	52.5231.0001	2	EA	RECEPT, FASTON .250 INSUL 18-12AWG
2	52.8298.0002	2	EA	TERM, WIRE PIN 16-14 GA.
3	52.8345.0001	2	EA	HOUSING, RECEPT 250 SERIES FLAG STYLE CONT STRIP
4	73.7089.0000	12.50	FT	WIRE, 22AWG BLK 300V TEFLON STRANDED
5	73.7089.0009	12.50	FT	WIRE, 22AWG WHT TEFLON STRANDED

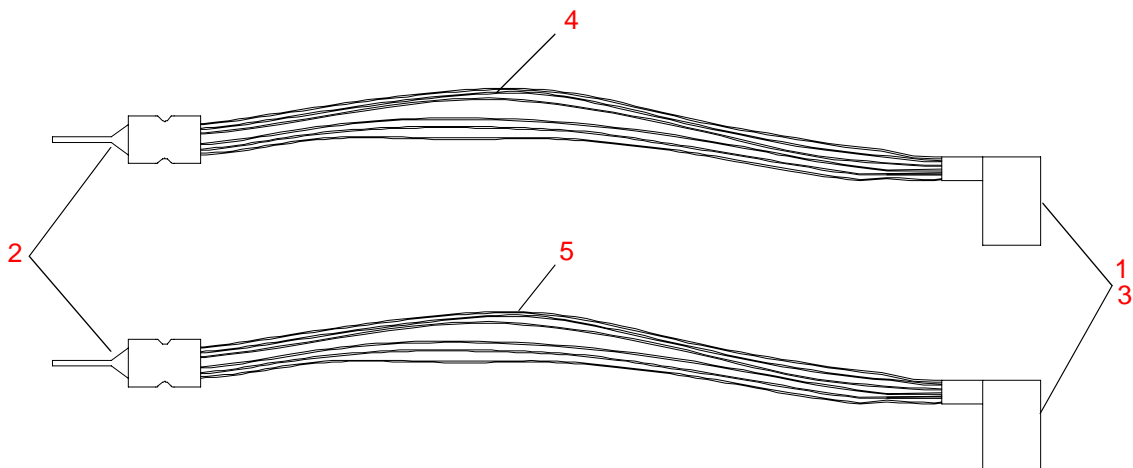


Figure 3-61: VL6B/VL6C Ignitor Board Input Cable Assembly

Motor Harness Cable Assembly VL6B/VL6C

25.9660.0513

Refer to [Figure 3-62](#).

No.	Item	Qty	UM	Description
1	52.6358.0001	1	EA	CONN HOUSING, MTA CLOSED END RED 3-PIN
2	52.6361.0001	1	EA	CONN HOUSING, 10-POS MTA CLOSED END RED
3	52.6396.2412	1	EA	RECEPT, 12-POS MTA100 W/POL TAB NATURAL 24AWG CLSD END
4	52.6396.2414	1	EA	RECEPT, 14-POS MTA100 W/POL TAB NATURAL 24AWG CLSD END
5	52.6424.0003	1	EA	COVER, 3-POS CLOSED END STRAIN RELIEF - MTA100
6	52.6424.0010	1	EA	COVER, 10-POS STRAIN RELIEF - MTA100
7	52.6450.1012	1	EA	COVER, 12-POS MTA100 STRAIN RELIEF CLSD END
8	52.6450.1014	1	EA	COVER, 14-POS MTA100 STRAIN RELIEF CLSD END
9	52.6467.0004	1	EA	CONN, FEM PLUG 4-POS 30-24 AWG CRIMP PHR
10	52.6467.0011	2	EA	CONN, FEM PLUG 11-POS 30-24AWG CRIMP PHR
11	52.6467.0024	12	EA	CONTACT, SOCKET 30-24AWG CRIMP (REEL) PH (JST)
12	52.8244.0003	2	EA	FASTON RECEPT, FLAG .250 22-18AWG (REEL)
13	52.8291.0001	1	EA	KEYING PLUG, MTA
14	55.6695.0001	0.25	FT	HEATSHRINK, 1/2" ADHESIVE WALL
15	55.6699.0003	1.50	FT	SLEEVING, 1/2" NOM. DIA. POLY EXP BRAIDED
16	73.1522.0002	2.60	FT	WIRE, 22AWG 150V 200C TFE RED UL1213/CSA
17	73.1522.0005	2.60	FT	WIRE, 22AWG 150V 200C TFE GRN UL1213/CSA
18	73.5108.0001	2.19	FT	WIRE, 24AWG 4COND TW 300V 105C (ORG BLU WHT GRN)
19	73.5108.0002	2.48	FT	WIRE, 24AWG 4COND TW 300V 105C (ORG-RED BLU-RED WHT-RED RED-GRN)
20	73.5108.0003	2.48	FT	WIRE, 24AWG 4COND TW 300V 105C (ORG-BLK BLU-BLK WHT-BLK GRN-BLK)
21	73.5108.0004	2.14	FT	WIRE, 24AWG 4COND TW 300V 105C (RED-WHT BLU-WHT BLK-WHT GRN-WHT)
22	73.5108.0005	2.44	FT	WIRE, 24AWG 4COND TW 300V 105C (RED RED-BLK BLK-RED BLK)

Motor Harness Cable Assembly VL6B/VL6C (cont.)

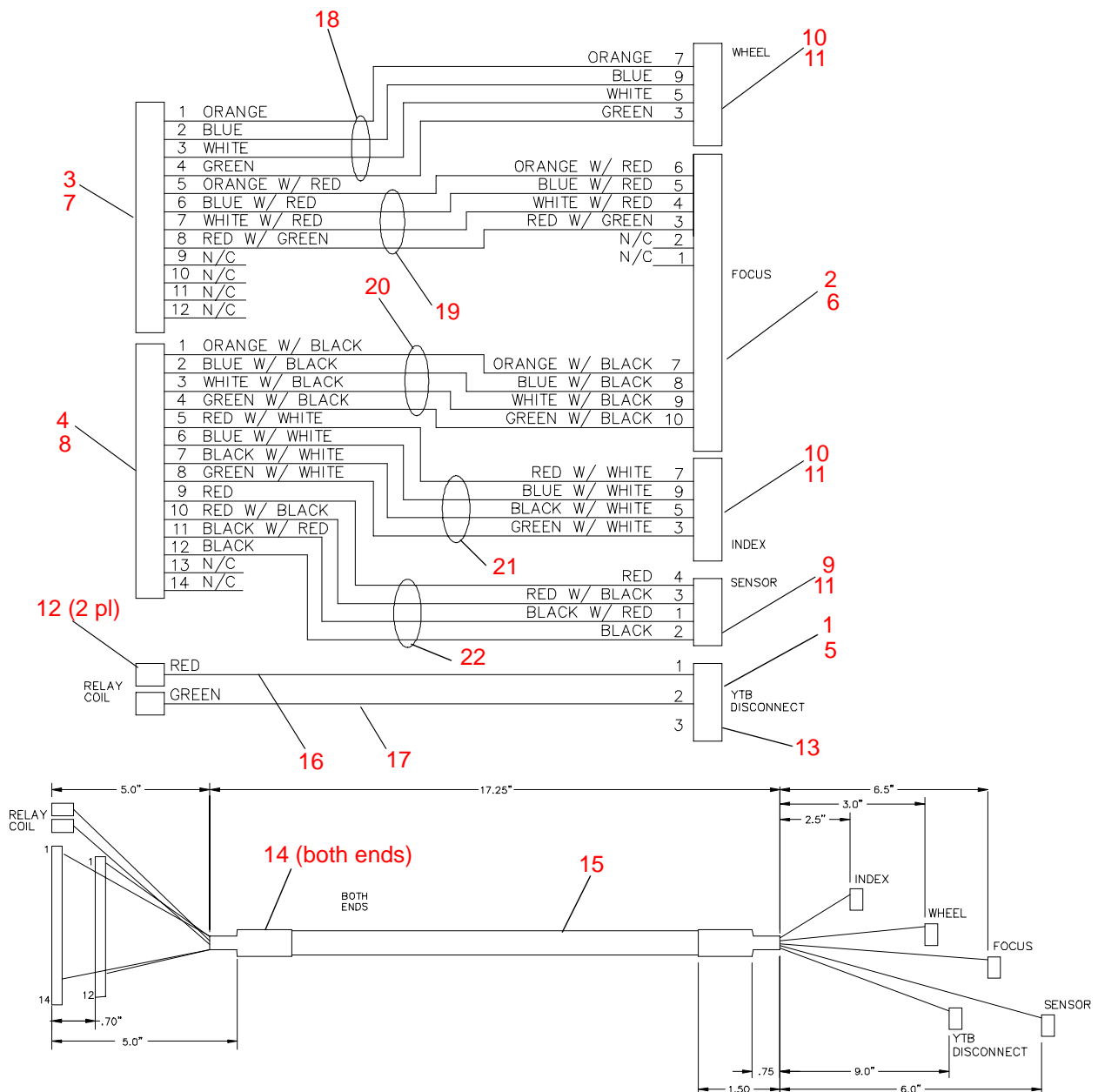


Figure 3-62: VL6B/VL6C Motor Harness Cable Assembly

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APPENDIX A.

Technical Bulletins

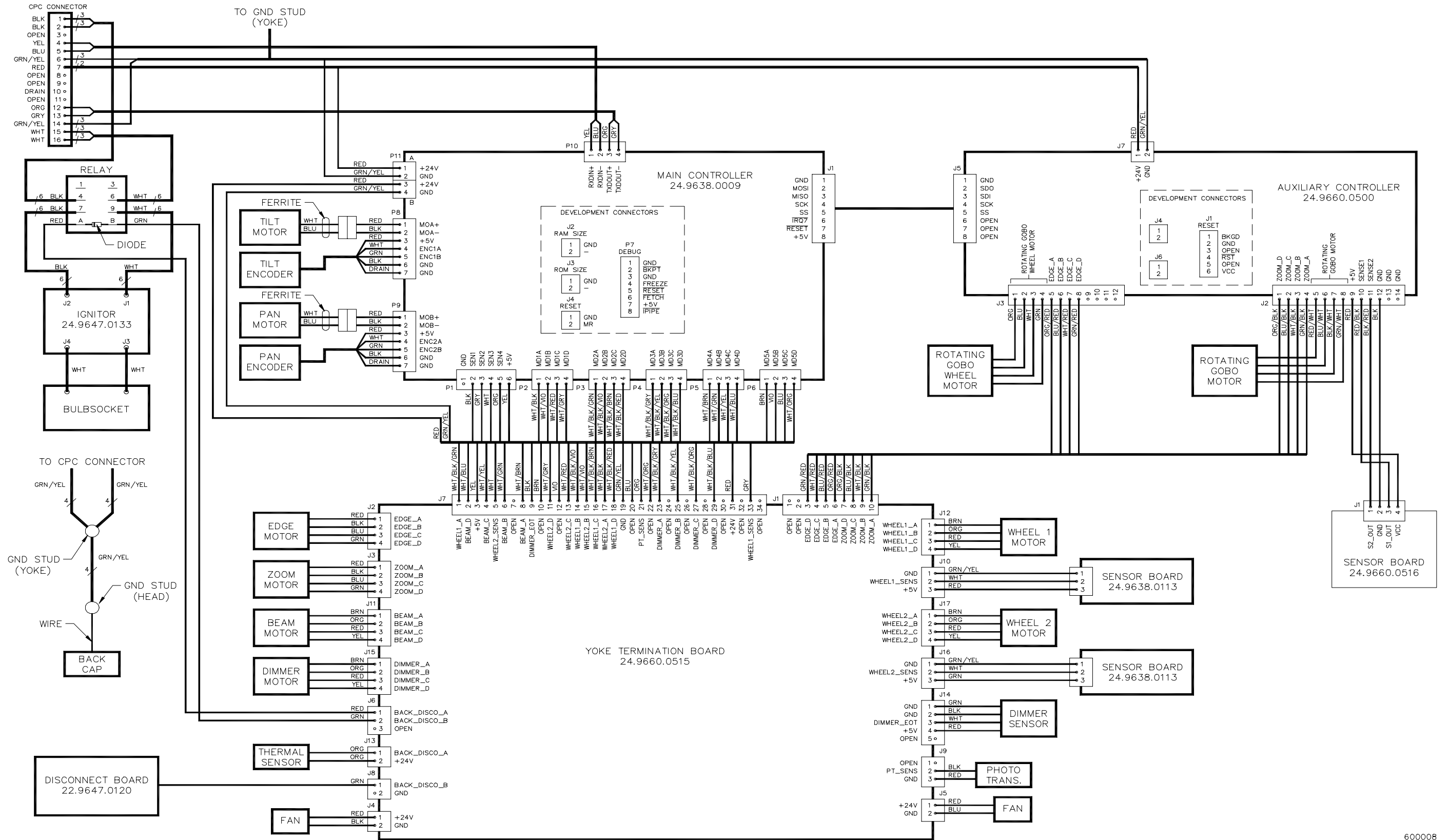
VL6 Series Luminaires Technical Bulletins

The following table identifies the current technical bulletins associated with the VL6 series spot luminaires.

Technical Bulletin	Description	Associated Luminaire
VL5-021A	Install new VL5™ and VL6™ luminaire and VLM™ moving mirror pan and tilt assembly driven pulleys and stops and lamp wire tie-wrap mounting block location	VL6
VL5-022	Install new VL5™ and VL6™ luminaire pan and tilt assembly driven pulleys and stops	VL6
VL5-032	Ferrite bead EMI shield for VL5/VL6/VLM pan and tilt motor wires	VL6
VL5-036A	VL5/VL6/VLM ground, UL listed, and dry locations labels	VL6
VL6-001	VL6™ Luminaire retrofit # 2	VL6
VL6-002	Adding VL5™ luminaire clutch and new lamp assembly compression spring to VL6™ luminaire	VL6
VL6-005	VL6 luminaire heat and reliability modifications	VL6
VL6-007	Adding black coating to one side of VL6™ luminaire beam size iris leaves to eliminate ghost image of iris leaves	VL6
VL6-009	VL6 color bulkhead heat shield installation	VL6
VL6-010	New VL6™ lens barrel half for improved focus	VL6
VL6-011A	VL6 wide angle and medium angle lens RTV modification	VL6
VL6-012	VL6 wide angle and medium angle lens retaining clip installation	VL6
VL6-013	VL6™ luminaire narrow lens dust prevention	VL6
VL6-014	VL6™/VLM™ pan tube ground cable and VL6 input rating label	VL6
VL6-015	VL6™ luminaire smooth moving encoder modification	VL6
VL6-016C	VL6B™ conversion kit installation	VL6B
VL6-017	VL6B™ luminaire revised gag retainer spring	VL6B
VL6-018	Converting a VL6™ ignitor to a VL6B™ ignitor	VL6
VL6-019	VL6B™ luminaire communications retrofit	VL6B
VL6-020A	Improved VL6B™ rotating gobo wheel aft mounting plate	VL6B
VL6-021	VL6B™ YTB yoke cable connector and solder point mod	VL6B

Technical Bulletin	Description	Associated Luminaire
VL6-022	VL6B [™] anti-backlash pad reorientation	VL6/VL6B/VL6C
VL6-023	VL6B [™] to VL6C [™] luminaire conversion	VL6B/VL6C

VL6B/VL6C Wire Diagram



600008